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Original Contributions.

THE ORTHOPEDIC ASPECT OF DISEASE OF THE NERVOUS SYSTEM. No. 2 SPASTIC PARALYSIS, Etc.

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THE advice of the orthopedic surgeon is very frequently sought in that distressing class of cases which commonly pass under the name spastic paralysis. The characteristic feature of spastic paralysis is a spasmodic condition of certain muscles or groups of muscles, and the degree in which this feature may be manifested varies within widely separated limits. In most cases the condition is congenital, and is frequently associated with a history of difficult childbirth, or with some traumatism occurring to the mother during her pregnancy. The following is a common experience: A mother seeks advice concerning her child, complaining that the child walks imperfectly, or has never walked, or perhaps has never even stood alone. A very brief examination is often sufficient to reveal the fact that the child is deficient mentally; but unless the intelligence is manifestly far below the average the parents will be slow to admit any lack of mental development. In most cases, however, close questioning will elicit the information that the child is backward, was slow in learning to talk, was uncleanly in its habits until an unusually late period, or is irritable or capricious. In many cases, however, the child is normal intellectually. On examination, the feet are commonly found in the equinus position, the heels being drawn up by the spasm of the powerful muscles of the calf; added to the equinus

there may be a varus, or valgus with pronation, making the deformity that of club-foot or of flat-foot according as the spasm affects more powerfully the tibial muscles or the peronei. There may be club-foot on one side and flat-foot on the other. The adductor muscles almost invariably show evidence of marked spasm, so that the knees are kept closely approximated and can be separated only gradually and by the exercise of considerable force. A spastic condition of the hamstrings will probably also be observed, causing more or less flexion of the leg upon the thigh. The child's efforts to stand and walk present a striking picture. Being unable to get the heel down, he stands upon the toes and anterior part of the foot, the knees are bent somewhat by the flexors of the leg, and the spasm of the adductors causes knock-knee, or may even cross the legs giving rise to cross-legged progression. Any effort to use the affected limbs causes an increase of the spasm, and while the contraction may be temporarily overcome by manual manipulation, or by the use of apparatus, it returns instantly as soon as the opposing force is removed. This is specially evident in the case of the adductors: by gentle continuous effort the surgeon may separate the patient's thighs, but the moment the pressure is removed they spring together again, unless the patient has trained his adductors to hold the knees apart by strong voluntary effort. In many cases the muscular spasm produces constant rigidity of the affected extremities, in others there are exacerbations of spasm, or spasm and relaxation may alternate, so that the extremities twitch and jerk uncontrollably, causing the patient much discomfort and even distress. While the lower extremities are most commonly and most severely affected, the upper extremities often participate, and it is not at all unusual for both legs and one arm to be involved, the other arm remaining quite under the patient's control and being capable of performing manipulations requiring fine muscular co-ordination. The muscles of the trunk and face also may manifest the spastic condition.

As a rule the patients are very nervous and sensitive, and any excitement or agitation increases their disability by augmenting the spasm.

The most practical aspect of the subject is the therapeutic. It is well within the bounds of truth to say that a very large proportion of these cases are either left untreated or are treated inefficiently. Practitioners everywhere recognize the difficulty, not to say hopelessness, of treating many of the lesions of the central nervous system, and knowing that poliomyelitis and spastic paralysis are due to an organic defect in the spinal cord or brain, the conclusion is too readily formed that the case is incurable and treatment useless. It is perfectly true that the lesions giving rise to poliomyelitis and to spastic paralysis are located in the central nervous system and cannot be greatly influenced by treatment of any kind; nevertheless, the *effects* of these lesions *can* be treated, and to a certain extent prevented, and often with a very

gratifying degree of success. In spastic paralysis a very considerable gain may sometimes be secured by corrective manipulation of the affected extremities, combined with massage and muscular training. "The patient may be trained to use the limbs better than he has been doing, just as a person who stutters can be improved by systematic and repeated exercises."[1] In patients who are able to walk the gait can certainly be improved by judicious and long-continued training in the use of the limbs in walking.

Clara G., aged thirteen years, was brought for consultation in June, 1892. Physically well developed but mental development imperfect, and the mental defect was plainly evident in the expression of the face. The adductors of thighs were strongly contracted and the child walked with the knees and thighs flexed and the femurs strongly adducted. Operation was advised but refused, and the patient was taken to other surgeons who advised against operation. Finally the patient was placed in our class in therapeutic gymnastics for three months, at the end of which time the effect of training was readily perceptible in a very marked improvement in the power and manner of walking. Operative treatment is required in many cases, and the results, while perhaps not brilliant, are certainly well worth the inconvenience and suffering imposed. If the feet are held in the equinus position by the spasmodic condition of the calf muscles, so that the patient is obliged to walk upon the toes, it will be admitted without argument that he will walk better if the heels be brought down so that he can bear weight upon the soles of the feet, and the locomotion of the patient will be correspondingly improved if the flexion of the knees and the powerful adduction of the thighs be also overcome. Operative treatment consists chiefly in the performance of tenotomy, fasciotomy and myotomy, usually followed by the use of such dressings or appliances as shall for a sufficient time maintain the parts in a position opposed to the deformity. To accomplish the greatest possible benefit the operation must be thorough and often extensive, and the open incision will sometimes be preferable to the subcutaneous. We have divided the tendo Achillis, the peronei, all the hamstrings, and

FIG. 1. SPASTIC PARALYSIS.

O. B., 9 years. Position assumed when trying to stand.

a large part of the adductors of both lower extremities at a single operation with benefit to the patient. It is a little difficult to explain satisfactorily just how the operation acts, but it is a clinical fact that a very marked improvement is frequently secured.

Mary M., aged twenty-nine years, first consulted us September 13th, 1896. Always delicate up to twenty years of age, but at time of consultation in body, intellect, affections, etc., seemed a strong woman. Both legs and right arm were markedly spastic, also some of the muscles of the trunk and neck. Adductors of thighs were strongly contracted, but she could voluntarily separate the knees somewhat. Hamstrings and peronei very spastic, causing flexion of knees and great pronation of the feet (flat foot). The slightest excitement, or the entry into the room of a stranger or new acquaintance would excite violent, uncontrollable contractions of the affected muscles jerking the extremities and trunk in a manner which was distressing to onlookers as well as to the patient. She had never stood on her feet and could not use crutches. Massage and efforts at training, continued for three months, produced some degree of improvement, but not much. Mechanical appliances were then tried, but they were hardly applied before the spasmodic contractions of the muscles became so violent that they had to be removed. The patient and her friends were much opposed to operative treatment, but seeing the hopelessness of other methods, finally consented to observe the effect of an operation on the muscles of one foot. On December 30th, 1896, we divided the peronei, tendo Achillis and extensor longus digitorum of right lower extremity and put the foot in the varus position in a plaster of paris dressing The dressing was removed in three weeks, and the improved position, together with the relief from spasm, were so marked that she very readily consented to further surgical treatment. She preferred to have one group of muscles dealt with at a time so that the operative treatment was spread over several months. The muscles or their tendons divided included a large portion of the adductors, all the hamstrings, the peronei and tendo Achillis on both sides: the sartorius on one side; the extensor longus digitorum on one side, and the flexor tendons of several of the toes on both sides. Improvement followed each operation, and although the long confinement and repeated operations told somewhat upon her general condition she improved readily after returning to her home in the country. At home her friends persevered faithfully in efforts at training according to instructions given them. We saw her again on September 11th, 1897, at which time the violent spasmodic contractions, which were one of the most distressing features of her case, had practically disappeared. About a month ago (November 28th, 1897) her brother reported that she was steadily improving, could walk a few steps by his simply supporting one of her arms, and that she intended soon to return to Toronto to see what could be done by surgical treatment for the affected arm.

Some authors state that there is less tendency to a reappearance of the deformity than after the correction by similar means of the deformities resulting from infantile paralysis: and while this is probably true, it does not follow that relapse need not be guarded against. Our experience clearly indicates that the greatest degree of benefit can be obtained only by following up the operation with mechanical apparatus designed to maintain the corrected position, or to assist in locomotion, or both. Besides the operative means above mentioned, arthrodesis is an available surgical procedure in some cases. In connection with the subject of treatment the importance of the mental training of these children must not be overlooked. Parents have repeatedly told us that they had been advised not to encourage the mental development of the afflicted child, and so have refrained from making any special efforts at teaching. Such advice is in the highest degree irrational and pernicious. Many of these children are more or less defective mentally, and it is of the greatest importance to secure by exercise and systematic training the highest possible development of such mental power as they do possess: and there is no lack of proof that efforts intelligently exercised in that direction are capable of accomplishing much good. So true is this that we are strongly of the opinion that it is the duty of the State to provide properly equipped institutions that will supply to these and kindred unfortunates the special training they require, the advantage of which over ordinary school teaching is beyond question. In the absence of such State provision, a parent or other instructor who intelligently grasps the necessities of the case, and who recognizes the principle of development by exercise, can do much to render the future of these unfortunate children less of a burden to themselves and more tolerable to their friends.

At first glance some surprise is apt to be felt at the suggestion that such affections of the nervous system as neuralgia, hysteria, chorea and laryngismus stridulus have any connection with orthopedic surgery, yet the specialist in this department of practice is brought into contact with them all. Neuralgia is met with as metatarsalgia, erythyromelalgia, sciatica, and neuralgia of the spinal nerves. Metatarsalgia (Morton's painful affection of the foot) is an exceedingly painful affection of the plantar digital nerves, the pain being usually spasmodic in character, and sometimes dating from some injury or over-exertion. The exciting cause is often the wearing of ill-fitting shoes. Its characteristic feature is excessive tenderness of one or more of the metatarso-phalangeal articulations, most frequently the fourth, and is best detected by pinching the affected joint between the thumb and finger. Some of the milder cases yield to massage combined with the wearing of suitable boots, but if at all severe operative treatment, usually partial excision of the tender articulation will be called for.

Erythromelalgia, described by Weir Mitchell, is characterized

by burning pain in the soles of the feet, the skin of which shows congested patches of a dull, dusky red or purple color. Occasionally it affects the hands. Owing to the extreme tenderness of the feet, walking is difficult or impossible, and it is this that causes the patient to seek the orthopedic surgeon's advice.

Persons suffering from sciatic neuralgia sometimes present themselves, under the impression that they are afflicted with hip disease or spinal disease. It may be remarked, however, that the error of mistaking disease of the hip or spine for sciatica occurs much more frequently.

Neuralgia of the spinal nerves is met with chiefly as a manifes-

Fig. 2. Spastic Paralysis.
C. B., 13 years. Unable to stand; mentally defective.

tation of Pott's disease, and disappears with gratifying certainty when efficient fixation is secured for the spine. In some cases of lateral curvature of the spine, neuralgia is a symptom more or less prominent.

Hysteria, in the form of hysterical joints and imaginary affections of the spine, is no more welcome in orthopedic practice than elsewhere, and may mislead the unwary. Familiarity with the multiform phases of hysteria as it is met with in general practice, is fully appreciated by the practitioner who has had such experience when he comes to deal with these cases, and may save him from humiliating errors in diagnosis. As to treatment, the same

tact and patience are required, and the same general principles must be followed, as in dealing with other hysterical manifestations.

In another paper[2] the writers have dealt with the relation of chorea to orthopedic treatment. Successful orthopedic work requires the application of therapeutic gymnastics to a large number of conditions, and the value of this means of treating cases of chorea which have reached a sub-acute or chronic condition, and have ceased to improve under other treatment, is well established. In cases of chronic chorea "the central nervous system has acquired an ataxic habit which demands its re-education, so that the impulses sent out may be subject to the will, and be made to affect only the group of muscles intended to act in harmony for the accomplishment of a desired end. The effort to make movements in harmony with those of others whose circumstances bring them into a sympathetic relation with the patient, the influence of example, and the force of the kindly but positive word of command given by the instructor, afford the needful aid and stimulus to accomplish the desired result." [2]

Laryngismus stridulus is occasionally encountered as one of the manifestations of rhacitis, the latter disease furnishing much orthopedic material.

Patients suffering from locomotor ataxia sometimes apply for treatment. They come in the early stage of the complaint, before a diagnosis has been made, under the impression that they are suffering from some weakness or lameness requiring orthopedic management. The only special treatment likely to prove of service is suspension and systematic training, one or both, and good results from the employment of these resources have been reported. These patients may also seek help at a later stage of the malady because of the development of a spinal arthropathy affecting the knee or one of the other large joints, this condition being commonly called Charcot's joint disease. Mechanical treatment designed to give the affected joint protection and functional rest may be of benefit. At the present time we have under observation a case of Charcot's disease affecting the knee, which we first saw about a year ago. The patient presented unmistakable symptoms of locomotor ataxia. Locally, the knee was enormously swollen and of little use, and coarse grating was easily detected when the joint was moved. Under mechanical treatment the swelling soon subsided very greatly and the patient was rendered much more comfortable. In this case, however, there was a history of syphilis, and the coincident constitutional treatment may have had much to do with the favorable result.

The arthropathy of syringomyelia may also bring this rare disease under observation; or the victim of this disease may seek advice because of the altered sensibility and muscular atrophy which accompany it, or on account of a coincident lateral curvature of the spine, which Howard Marsh states has been observed in nearly half the cases of syringomyelia. [3]

Hereditary ataxia (Friedreich's disease) is an extremely rare affection usually developing in childhood, at puberty or in early manhood, and resembling locomotor ataxia: but the lightning pains of the early stage of locomotor ataxia are absent, and there are no marked crises. Moreover, in hereditary ataxia the upper extremities are involved earlier and more severely than in locomoter ataxia. Its interference with locomotion, and the deformity known as contracted foot, to which it may give rise, may bring it into relation with orthopedic practice.

Pseudo-hypertrophic muscular paralysis is a chronic progressive affection characterized by a diminution or loss of the power of certain muscles, together with an increase in their size; coincidently there is diminution in the size of other muscles. The muscles of the calf are among those which are most frequently found enlarged. (Fig. 3.) In both the enlarged and diminished muscles there is an atrophy of muscular elements, but in the former there is also an abnormal deposition of fat, with hypertrophy of the connective tissue. The disease nearly always develops during childhood, and the influence of heredity may often be traced. It first manifests itself by muscular feebleness. The patient walks with a peculiar waddle, because, in order to compensate for loss of muscular power, he throws the centre of gravity of the body over each leg in turn as it supports the body weight. The weakness of the glutei and of the muscles of the back causes a marked lordosis of the lumbar spine in standing; while in kneeling on the hands and knees there is a characteristic sagging of the back, causing a saddle-shaped depression. There may be associated mental enfeeblement. In time deformities appear; owing to distortion of the joints from contracture of some of the muscles, there may be talipes equinus, flexion of the knees and thighs, lateral curvature of the spine, etc. Here again the intelligent application of therapeutic gymnastics and massage may do much to improve the nutrition of the affected muscles and retard the progress of the disease; mechanical treatment may prevent contractures; and a combination of operative and mechanical treatment may do much to correct deformity that has occurred and thus make the condition of the patient more comfortable.

"The stimulation of the muscles by electricity has been employed and advocated, but, however sedulously employed, I have never seen distinct effects from the use of either faradaism or voltaism. Indeed, we have no facts whatever to justify the expectation that any form of electricity, that could be applied to the muscles, would influence the interstitial growth of fibrous tissue, or that any electrical stimulation of the fibres can save them from the destructive influence of the compression they endure. It must be remembered, moreover, that electricity is a very feeble agent in stimulating muscular fibres to growth compared with the physiological stimulus of voluntary effort. Muscular exercise does seem to have some influence in retarding the failure of power. It

may, perhaps, cause some growth, or increased capacity for contraction, in the muscular fibres that have not yet suffered. It is possible also, that it may, to some extent, divert the trophic energy from the interstitial tissue, since cessation of muscular exercise is certainly followed by quicker failure of strength. Hence it is desirable that the patient should carry out carefully planned gymnastic exercises, so arranged as to call into action the muscles that most need help. These thoroughly persevered in, have seemed, more than any other means, to retard the disease. But they have not in any case arrested it. Rubbing and massage are useful, combined with passive movements, in lessening the tendency to mus-

Fig. 3. Pseudo-Hypertrophic Muscular Paralysis.
E. B. S., 26 years.

cular contraction and consequent deformities. The influence of muscular exercise renders it very important to keep the patient on his legs as long as possible. The ability to stand and walk is generally lost, through the contraction of the calf muscles, some time before the muscular weakness would take the patient off his feet. In such cases tenotomy may restore the power of walking for some years, and when contraction returns, its removal has, a second time, set the patient on his feet again. The operation is thus distinctly beneficial."[4]

Progressive muscular atrophy is a chronic progressive affection characterized by a wasting of the voluntary muscles. It is exceed-

ingly insidious, and usually begins in the muscles of the hand or in the shoulder muscles. From the part first affected the disease spreads, and usually early involves the muscles of the back. The lower extremities are affected less commonly, and usually to a slighter degree, but occasionally the disease first manifests itself in the legs, and is more marked in them than elsewhere. The face is rarely attacked. Deformities may come on as in cases of paralysis from the unopposed action of healthy muscles, and it is because of these results as well as from inability to walk owing to the weakness of the limbs and loss of power to hold the head and spine erect, that the unfortunate patient applies to the orthopedic surgeon. Mechanical treatment, massage, etc., will do not a little in certain cases to remove from a disease that is incurable some of its distressing effects.

Obstetrical paralysis affecting the arm may, according to the severity of the case, require treatment by massage and training, or by operation designed to produce ankylosis of the shoulder, or it may even demand amputation. Training will be useful in proportion to the limited extent of the lesion.

Torticollis may be a manifestation of some central nervous lesion, and while the cause cannot be removed, operative treatment of the affected muscles, followed by prolonged fixation in an over-corrected position, and the subsequent employment of massage and wisely-directed gymnastics will often secure very marked improvement.

Dupuytreu's contraction of the palmar fascia is believed by some authorities to be a neuropathic affection,[6] a view with which the writers are in accord. We are also of opinion that the corresponding condition of the plantar fascia, to which the name "contracted foot" may be applied, must also in many cases have its pathological basis in the nervous system. Both of these affections are susceptible of great benefit from operative and mechanical treatment.

Cases of unilateral hypertrophy or of unilateral atrophy are probably, in some instances at least, due to neuropathic disturbance. Bradford and Lovett suggest that certain of these cases are the result of a slight former hemiplegia, which has manifested itself chiefly in retarding the growth of the affected side without any distinct loss of motor power. In support of the theory they instance a case where the right side of the body was distinctly behind the left in growth, but the left side of the head was smaller than the right side—a relation suggesting the existence of some lesion of the trophic centres in the left cerebral hemisphere.[5]

Cerebral traumatism may give rise to effects that may advantageously be submitted to surgical treatment, accompanied, if necessary, by the use of apparatus. At the present time the writers have under observation a boy, seventeen years of age, who, when a child was injured in a most peculiar way. While running with a sharp stick in his hand he stumbled and fell; the stick

entered his mouth, passed through the palate and penetrated into the cranial cavity. After a severe illness he recovered with paralysis of the right leg and arm, and some involvement of the muscles of both sides of the face. The leg was not so badly disabled but that he could get about pretty rapidly and comfortably, but the right hand was almost useless, being small and strongly flexed. It was thought that if the wrist-drop could be overcome and the hand brought into line with the arm it would at least present a less objectionable appearance, be less in the way, and might possibly be more useful in the few manipulations which such a disabled member was capable of, for example, holding a sheet of paper on the desk while writing with the other hand. With this in view we operated with the object of producing ankylosis in a straight position at the wrist joint. Unfortunately some sloughing followed the operation, also slight necrosis of portions of the carpus; but in spite of these unfortunate circumstances we have reason to believe that no small gain will be secured by the operation, although as the patient is still under treatment it is too early to pronounce final judgment upon it.

Cerebral and spinal tumors, retarded mental development and all degrees of mental defect to complete idiocy, diphtheritic paralysis, the paralysis of Pott's disease, neuritis, trophic disturbances due to injuries, railway spine—these may be simply mentioned as affections of the nervous system which are met with in orthopedic practice because of deformity, muscular weakness, or interference with locomotion of which they may be the cause, or on account of the need of therapeutic resources which are not at the command of everyone engaged in general practice.

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12 Bloor Street East, Toronto.

Dr. A. A. Macdonald, of Simcoe Street, Toronto, will oppose Dr. Spence in the approaching election to fill the vacancy in the Ontario Medical Council caused by the death of Dr. Jas. Burns.

A POLITICAL ASPECT OF MENTAL DISEASE.

BY EZRA HURLBURT STAFFORD, M.B.

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MUCH of what now seems utterly incredible in history was without doubt due to mental disease: either endemic, as when whole races have been known to have become insane upon some one point, often a religious one: or in isolated cases, when the mental derangement was confined to a particular person, and that person one who, by reason of the great power and authority vested in him, was able, while laboring under delusion, to precipitate the greatest calamities without opposition. Reflection upon this matter serves to bring out the preposterous risks entailed in anything like individual rule, where the welfare of large numbers of people depends to a great extent upon the clearness of one person's reasoning faculties.

In occidental civilizations, where the growing tendency is to regard the man as a unit of the State, the following reflections will be received in far greater seriousness than in a civilization where the vast mass of the population is regarded in no other light than as a bulky and extraneous appendage of the State.

It is well betimes to go back to the words of Pascal. "Cromwell," he says in the Pensees, "was about to ravage all Christendom: the royal family was lost, and his own forever powerful, had it not been for a grain of sand that got into his ureter. Rome even was about to tremble under him; but this little gravel having got there, he died, his family was abased, peace restored, and the king re-established."

The beginning of wars, the fall of dynasties and the decline of empires may often be traced to such trifles. And though leading to results so momentous, they seem to have been usually disregarded, and often overlooked, because they were in themselves so trivial: or possibly, because in the past the physician, who could best understand the inward circumstances of the matter, was for the most part a timid family servant, and his sphere being more or less domestic, and his authority not extending beyond the bedchamber, he would have brought forward the real solution to the perplexing case in point at very great peril to his ears. It was very uncomfortable to sit in the stocks, and would have interfered somewhat, I fancy with practice.

Meanwhile courts retained their arrogance, and governments their dignity. It must seem, however, that as long as governments are in the hands of single, or even small groups of individuals subject to physiological laws, that this pomp and dignity which is so familiar to all, must partake somewhat of the spectacular dignity of a baloon. A baloon is very dignified.

Nicolo Machiavelli assumes, I think, that the viscera of the Prince are normal. But then Machiavelli was not a physician. It is important at all events that those in great authority should enjoy sound health—partly for their own sake. Perhaps it is better that a ruler should not suffer from dyspepsia. This affection sometimes affects the mental lucidity of common people, and possibly it might hamper the intellectual workings of a ruler as well. There are other derangements also. For instance, it is unfortunate when a ruler happens to be an epileptic. But it has not been the custom, I believe, to subject persons who bear great responsibilities of State to a medical examination such as applicants for thousand dollar insurance policies usually undergo. Writers on constitutional history have ignored this question. But then a thousand dollar insurance policy is a very important thing.

Emotion in a general sense belongs to the study of metaphysics. It is only when one particular emotion occurs in the life of a ruler that it becomes historical. History is in great part an enumeration of the emotions of so-called great men and what those emotions lead to. The inhibitory power is strong in health. In disease, when the glandular secretions are diminished or perverted, and the whole system is suffering from toxic irritation or exhaustion, the inhibitory power becomes very feeble sometimes, and the emotions have very free play. Where the exact line is, it would be very hard to say, but there necessarily is a line beyond which the play of the emotions may be said to constitute a more or less serious form of insanity. In disease, also, a certain perversion, and at other times an actual torpidity of the mental powers ensues, which might also be designated as a form of insanity.

The court physicians of Babylon, though Assyria was a pastoral country too, were not familiar with thyroid feeding, and it would seem that animal extracts of the sheep were altogether unknown at that time. Possibly Nebuchadnezzar might have been benefited by such a course of medication had it been thought of. Also the condition of the Hebrew king of a somewhat earlier period might (or might not) have been such as to indicate small doses of the same. Another plan of treatment appears to have been adopted in his case, and whether wisely or not it is difficult to say with any assurance at this rather remote day. David did not very long survive the occasion referred to, and no further mention is made of the young lady. Certainly in the case of King Lear, at a much later epoch, we know that "mild restraint" was attempted, just as it is attempted in similar cases to-day, but the best clinical authority upon Lear's malady would seem to imply that mild restraint in his case was not all that was to be desired. For that matter with kings it may even fail to-day, as one may infer from a notable instance in the house of Hohenzollern.

The emotions of history, as of literature, are very rarely what in the light of psychiatry would be called normal. In a ruler the attributes of madness and of greatness were for many centuries in

the popular mind interchangeable qualities. There is still some confusion upon this point.

Two physiological phenomena are officially recognized by legal authorities. Parturition is one, and the other is dissolution. Legal authorities have not, in the official capacity, extended their researches in the interesting study of physiology any further. Possibly these two are the most important phenomena. Certainly they are often of considerable political interest. Nevertheless it is that peculiar grand way of ignoring sundry other physiological phenomena, sometimes observed in the great as well as in the vulgar mob, that often renders the dignity of a great and glorious nation the dignity of a baloon. The progressive change in paralytic dementia are not very rapid, and when the ruler of a great empire has the misfortune to be stricken with this disease, he can, if reasonably active, do much towards ruining the nation under his care before the final stages of the disease bring his career to a termination. In such cases the court physician, whose rank is that of a body servant, may possibly recognize the state of affairs, but there is no official recognition of the fact. The king's own advisers, if they are wise, do not recognize it. As for the physician, he has probably observed the interesting phenomenon before, and by holding his place in the service of the royal household, which greatly depends upon his first holding his tongue, he may live to recognize it again.

For the wise physician is especially reserved that which has from time immemorial been considered to be golden—namely, silence. He is supposed to be inarticulate. Indeed, volubility in him is a species of insubordination. Musa, the physician of Augustus Cæsar, saw a good many rather interesting things, but he is said to have been a silent man. To make the practice of medicine really profitable it behooves the physician to be of a silent habit. The vulgar usually confuse this with erudition. The prudent physician, however, never confuses his practice with it.

But though in the past a feeling of discretion, which especially befits one of very slight prestige, may have restrained the medical representative, even at junctures when the temptation to have spoken must have been very great: the rapidly altering social conditions of the present epoch must sooner or later enlarge the functions of the medical profession and possibly even endow it with some of that arbitrary power in public as well as in domestic affairs, which was for centuries enjoyed by the ecclesiastic.

From the body-servant and bedroom autocrat of a former day may possibly be evolved, as the social conditions referred to more and more strenuously require it, a functionary of even greater than sacerdotal authority.

The ecclesiastic of to-day is a very composite character, with perhaps more of the pedagogue than the seer, and more of the improving entertainer than the guide, philosopher and friend; and in the nature of events he must ultimately be relegated, as poets

and artists have been, to the world of sentiment and æsthetics. For the sacerdotal office must of necessity undergo modification as the habits and the propensities of the race gradually alter with widely altering conditions. Dogmatic theology sufficed during one phase of human development. The gospel of physiology is in reality, if not in name, the accepted religion of the present.

In the hands of the true physician the whole distorted fabric of domestic life, partly traditional, partly accidental, mostly artificial and, in some instances, altogether unnatural, could (with due reverence) be separated into its component parts, and carefully readjusted in accordance with natural law, which is, after all, the only law which never changes, and is always consistent. Especially does some bold step seem necessary at a time when the manifold signs of degeneration in the race have become so conspicuous, and when the physiological relationships of human society are being so viciously perverted from their natural channels, and practical Malthusianism become so common a domestic accomplishment.

True, one hears the noise of the novelists, French, Russian and female, but they do not speak *cum autoritate*. The perplexing problem of sex is not a literary nor a theological question, but a medical one entirely, and one very closely connected with the interests of the State. A posterity of degenerates, criminal or insane as the accident may turn, is not to be desired. Yet much of the racial degeneration, of which recent alarmists stand so greatly in awe, is certainly due to mistaken views upon these very matters. The last stage of Tradition is the utterly grotesque! But this *en passent*.

A certain number of lunatics have always been found in positions of great authority. Who can count the mad kings, the mad queens and the mad statesmen? From the processes of disease none enjoy immunity. The greatest autocrats have been observed to be subject to tuberculosis and *lues venerea* and insanity. Tissue is tissue, and weak and diseased tissue is simply weak and diseased tissue. There have been times when a century of time might have been saved to the world, untold wealth and myriad lives if the world could have recognized this apparently simple fact. Generations of flabby indolence and vicious dissipation have not been found to be the best substructure for the highest types of our species. The last of such a line is merely an irresponsible victim, but a nation's welfare is (by the nation) considered of greater importance than a family's pride.

One of the most interesting madhouses in the world, from the standpoint of the alienist, is the Senate of a certain Government. All Upper Houses seem to partake in a greater or lesser degree of this quality. Senile dementia is the form of mental derangement (or rather decay) which preponderates, though *folie des grandeurs*, or megalomania, is often observed. The Senate, awful parallel, is formed by the same law as many valuable scientific discoveries are made—by the law of exclusion. Where a multitude

of all sorts and conditions of men form a political body, it necessarily follows that in the course of years many of those who have enjoyed very respectable reputations, and have done great service to their confreres (and possibly even to the State at large) should slowly cease to be very useful. When the softening process mellows down to an unmistakable senility, the individual is usually elevated to the Senate Chamber. The Senate is the dement's Valhalla. The dement does not live in the present. He chews a cud of anachronisms, and like other ruminants enjoys for a second time, in the twilight of his honored age, the fodder which delighted him in his pubescent morn. The spectacle is comfortable and pathetic. There is something inexpressibly moving in the slow and unexpectedly actions of an Upper House. A still and brooding wonder. A whispering gloom and pensive melancholy. A helpless tendency to wheezing and expectoration. A rhetorical partiality to tautology, and withal that habit of interfering in affairs of gravity, peculiar to the mentally collapsed. Possibly it would be considered indecent to disturb that which is already moribund, but the burden is great, and any idea of decency is only traditional, and not under any possibility scientific.

Even Cabinets are not exempt from examples of mental decay. A kinsman of a certain General who had once played a rôle highly satisfactory to himself in a certain domestic war, or brawl, when at an advanced age entered the Cabinet of a great Republic. It was at a very critical moment in the nation's career. I fancy he must have attended a great many dinners where the refreshments were of a fiery nature, and the after-dinner speaking in harmony with the refreshments. I should fancy that this would tell upon a man eventually. A marked tendency upon the part of many cities also to call streets after one must have a bewildering and unsteadying effect upon the higher nerve centres.

A man in this condition is hardly fitted to address personally a great power, which assumes that the nation which he represents is responsible for all that he says. There is great need of a privileged physician here. The seat of the jingo diathesis is obscure, but the worst outbreaks of this obsession point to careful medication—and rest. An incident of this sort sometimes affords an excellent criterion moreover by which the impassive observer may gauge the general sanity of the race in question, for all those of the race who have any susceptibility to the same unfortunate malady become, at the sight of such a spectacle, instantly enkindled with the same delusion and the same obsession, so that such a man may lay claim justly to having awakened all the nascent insanity of his contemporaries, just as the senseless barking of one dog will start all the dogs of the vicinity to barking for hours. This is endemic insanity.

But to return to the central cause of the manifestation. A few ounces of gray nerve tissue in an old man's brain has become changed by the processes of decay or of acute disease. In his

helpless mental condition, and dazzled to frenzy by the glaring marsh lights of madness, the unhappy man becomes blindly frantic, and while his ears buzz with strange sounds, and his eyes blink with startling hallucinations, he bellows forth, with a maundering sense of inspiration, the words that insult and outrage a great power; upon which war, like a sudden thunder-cloud, breaks blackly across the heavens, amid the noise of the armies.

The impressiveness of the baloon, with all its weakness! It is the old story that runs all through history, and will as long as it is assumed that there is anything fixed and definite in the human machine. A bit of sappy protoplasm: assimilation, osmosis, metabolism and then decay!

"But this little gravel having got there, he died, his family was abased, peace restored and the king re-established."

BRIEF NOTES ON INFLAMMATORY, CYSTIC AND DEGENERATIVE DISEASE OF THE TESTICLE.

BY THOMAS H. MANLEY, M.D.,

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Of all the active, symmetric, secreting organs in the human being the testes are the only ones quite outside the body, a circumstance on which the principal causative factor of hernia in the male depends: and in consequence of this singular and inexplicable deviation from conservatism, in construction and development, and their exposed position, the testes are liable to injury and prone to pathologic changes.

Anatomic Features.—The testes maintain their suspended, pendulous position in the adult in consequence of their weight, on the end of a highly elastic ligament, known as the spermatic cord. Besides, they are more or less anchored in position by the gubernacular duplications of the fibrous vaginal tunics, which, also, are highly endowed with such remarkable, expansible properties as to permit the recession of the testes up to or into the inguinal canal.

The testicle is invested by muscle, aponeurotic cellular tissue, and a very peculiar type of integument, the scrotal pouch which is rich in smooth muscle fibre and elastic tissue.

The secreting structure of the testicles is a semi-solid, extremely friable, pulpy tissue, in color and consistence very much like that of the brain, which, when lacerated through an open wound, gives issue to a vascular, fungous mass, very much like hernia-cerebri.

The epithelial arrangement of the testes is very much like that of the ovary: its follicles are spacious, the epithelia stratified, cuboidal.

The relative amount of connective tissue here is very small, and hence its close, gross resemblance to medullary tissue.

It is, therefore, apparent that though the testicle is an exposed organ, its elastic constituents and its tendency to retraction up to, or into the inguinal canal often safeguard it against the effects of violence.

The epididymis is a tubular retention *depot* for the semen, being less vascular, but a denser structure than the testicle.

Inflammatory Lesions of the Testicle.—Inflammations of the testes are: *traumatic*, or *constitutional*, *simple* or *specific*, *acute* or *chronic*; besides suppurative, cystic, degenerative and other types dependent on peculiar constitutional conditions, malignancy, etc.

One rather striking clinical feature peculiar to nearly every type of orchitic inflammation is, that it is rarely that more than one testicle is involved, and that one, in the preponderance of cases, the right.

Traumatic Inflammation, peri-orchitic, vaginal or serous, is by no means uncommon.

It is true that in most cases, where one comes to us complaining of inflamed testicle from a "strain," gonorrhœal infection is at the bottom of it; but, nevertheless, there is a considerable number in which violence is the only etiological factor.

The pathologic peculiarities about this type are, that it seldom advances beyond the stage of parenchymatous turgescence, the testicle is swollen somewhat, but devoid of the dry, hot feel of infectious inflammation: the epididymis is free and there is evidence of effusion within the vaginal pouch. Almost invariably in these cases we will have evidence of infiltration and extension along the *whole length of the spermatic cord*, often the tenderness most marked within the inguinal canal, where intumescence of the vascular element of the cord is restrained by the resisting fibrous walls of this passage.

Very commonly the patient is strongly impressed with a belief that he is ruptured.

While this condition remains, the injured is exceedingly apprehensive and despondent.

Three of such cases have recently come under my care – one in a bicycle rider, one in a butcher, and one in a piano-mover.

In every instance the local and general distress was so great, that each was firmly impressed with a belief that some radical operation must be done for his relief.

Traumatic orchitis of varying degrees has become very common, since bicycling is general, especially among inexperienced or very hard riders.

Constitutional or *Infectious* orchitis appears in various types, the most intense being witnessed in metastatic parotiditis, but we may have it in rheumatism and other febrile conditions. Those varieties, of the greatest interest to the surgeon, are the infectious or specific, as *blenorrhagic*, *tubercular* or the *syphilitic*.

Sarcocele, Orchitis, Hernia Carnosa, Epididymitis.—In former times before the pathologic factors in operation in orchitic inflammation were well understood, every considerable enlargement of the testes, without marked, sensible inflammatory changes, were designated by the ambiguous term, "sarcocele, or hernia carnosa." But with our present knowledge of the histological changes in operation these terms become obsolete, and are interesting only from an historical standpoint.

Exclusive of malignant and degenerative changes, no doubt, they all primarily are dependent on inflammation. I omit to say "infectious," for evidence is yet wanting that microbic invasion of pathogenic bacteria is at all essential in all types of non-malignant cellular proliferation.

The most common type of orchitic inflammation is gonorrhœal; either by direct infection, through the sperm ducts; by irritating urethral injections spreading along the lesser tubular structures or by metastasis.

In this type of inflammation its force falls on the epithelial elements, and the submucosa of the secreting ducts. With its onset all the characters of inflammation in most cases are pronounced. In nearly all instances, simultaneously with its advent, the urethral discharge ceases or greatly diminishes.

Inflammatory changes are most marked in the epididymis and extend up along the spermatic cord, in occasional instances crossing the internal ring and through the root of the funicular process involving the peritoneum. In all these severe cases the extent of vascular engorgement is very great.

Suppuration of the testes rarely, if ever, sets in, unless the patient be of a tubercular diathesis: for the reason probably, as claimed by some of our best authorities, the gonococcus is not a pyogenic germ.

It has been noted, that when gonorrhœal inflammation involves the testes consecutively at intervals, the sperm cells are destroyed, when azoospermia or aspermia succeeds, leaving the individual forever impotent.

Of late years, since Janet's method of treating gonorrhœa by large vesical injections of antiseptic fluids has been so largely adopted, it is said this type of orchitis is becoming less frequent. According to Valentine's experience, it never occurs at all by intravesical, permanganate injections unless awkward, unskilful manipulation is employed.

Syphilitic orchitis is sometimes encountered. Here we may have both testes simultaneously involved. The organs attain a considerable volume and occasion inconvenience rather from their weight than pain or tenderness. Here, as in most other types of visceral syphilis, the effects of hyperplasia involve rather the walls of the blood vessels and the connective tissue reticulum than the secreting elements.

The extent of induration is most marked, the testes having a

hard knotty surface. When unilateral, in chronic cases it presents certain features similar to sarcoma, when correct diagnosis is only verified by internal treatment.

Where extensive interstitial changes with large gummatous deposits are obvious: and when function is totally destroyed, with evidence of probable suppurative degeneration, the only permanent and radical relief is to try castration on the same principle that a carious tooth is extracted.

Cystic and Suppurative Lesions of the Testes.—It yet remains an open question whether or not cystic disease of the testes is directly or remotely connected with inflammatory changes. As a complicating factor in inflammatory lesion cysts most certainly do exist: and as independent formations, as those of the ovary, and elsewhere they undoubtedly do. Sometimes we will find them proliferating, when they no doubt depend on disturbances of nutrition. Curling believed that they sometimes depended on occluded seminal tubules. The various metamorphoses which they often undergo have been well described by Bottcher. (*Dorp., Ztcher*, 1871, 14, 4.) Waldeyer believed that most cysts of the testes depended on changes in the epithelia He found such conditions in the ovary and the testicle, alike, in the new-born. (*Microscop. Anat.*, p. 465 and 151.) Rindfleish regarded them as a colisa degeneration of a vascular origin (*Handbuch*, 1873, p. 481.) Delfan believed that they consisted essentially in degenerative changes in dilated tubules, although their myxomatous appearance sometimes rather suggested their lymphoid origin (*Malad de Voies Urin et des Organs-Genit*, p 939, ch. XII.) Encysted hydrocele of the testes consists of a tumor senile and pedunculated, usually situated at the head of the epididymis. It springs up from the remains of the Wolffian-bodies and contains spermatozoa. Microscopical examination of removed fluid always determines the precise character of these neoplasmata.

Mernet has described a dermoid cyst springing from the base of the testes and encroaching backward into the perineum. Pearce Gould has met with a large dermoid cyst of the testes which had been mistaken for hernia. (*Lancet*, Nov. 7, '94. *Bull. de Soc. de l'Accat.*, Nov., '95.) Dr. Robert Taylor, of New York, has called attention to the marked tendency of adeno-sarcoma of the testes to undergo central cystic changes. (*Jour. Cut. and Genito-Urin. Dis.*, August, '94.) Brindel, Krewisiki and others have noted this same transformation of elements in other diseases of the testes than in malignant disease. (*Jour. de Med. Bordeaux*, Mars., '91.)

Primary and Secondary Cysts of Testis.—Primary cysts of the myxomatous elements of the spermatic cord in the new-born is common enough, but as a primary pathologic state, it is very rare in the testes, almost never in the epithelial elements, occasionally in the epididymis, and most frequently in Morgagni's bodies, or the so-called hydatids of Giraldes.

As a secondary lesion, in either specific or malignant disease of

the testes, it is very frequent, the elements of the cysts generally consisting of degenerate epithelia. Suppurative degeneration—intracystic—no doubt does occur in the testes as well as elsewhere. It may occur as well in the deep parenchymatous as those located on the surface of the organ.

This metamorphosis, no doubt, is attended with microbic invasion, but it is first induced, without doubt, by constitutional conditions or local injury to the part. For example, one may be conscious of an elastic fulness in one of his testicles, which will never give him any annoyance, possibly, unless he develop *grippe* or tuberculosis, or has in some manner sustained a contusion of the testicle. Now, local with constitutional symptoms are made manifest with evidence of suppurative changes, which may go on to spontaneous discharge, wide-spread diffusion or possibly inspissation, disintegration and resorption.

Suppurative Testes, Infectious or Consecutive to Malignant Disease.—Tubercular testes, or any description of open suppuration of the testes is not often met with, except in connection with pulmonary disease. The progress of the infection is slow, as a rule, until advanced stages of the lung disease are reached. There are many exceptions, however, for quite a few cases presenting features of tubercle, with abscess formation, have but indefinite and uncertain signs of lung disease.

In tubercular testes, the histological elements of the parenchyma are first involved: probably the lymphatic and plasmic tracts, at the outset: later capillary thrombosis succeeds, and epithelial invasion follows.

When tubercular bacilli are found in this type of suppuration, we usually see them in greater number around or within the nuclei of the cast of epithelia than in the protoplasm.

In undeveloped cases of tubercular suppuration of the testes, it is easy to conceive of transference of the malady to the female, or its development in the fœtus through the bacteria acting directly on the cuboidal nuclei, of which the spermatozoa are ultimately formed.

It is well to remember, that in dealing with purulent testes, we must deviate in our treatment of it from a well-established law in surgery, viz., not to hazard any extensive mutilating operation on the organ of the subject of well-established tuberculosis of the lungs.

There are very cogent reasons for this departure: Because in suppuration, tubercular orchitis with psychical disturbances is often well accentuated, our patient is morose and extremely despondent, and more in certain instances, when the tension of the pyogenic membrane is considerable, the degree of bodily exhaustion and cardiac depression may be alarming. I saw a man last year who was brought near the moribund state by an interstitial tubercular abscess of the right testicle: but free incision, evacuation and draining effected the most remarkable transformation. Several

other instances have come under my care with similar salutary effects after incision or castration. Another reason, independent of effecting relief, comes from surgical intervention here; the patient, for a time at least, rapidly regains strength and vigor; an additional lease of life is enjoyed.

Recent microscopical examinations have demonstrated that when acute suppurative orchitis follows typhus, typhoid fever or pneumonia, the bacterium coli, or pneumococci are present in great numbers. It is most extraordinary to note when the ravages of gangrenous erysipelas seize on the scrotal tissues, how the testes and end stand out nude and defiant of the streptococcus, so dreaded in the serous or connective tissues.

Degenerative changes affecting the testes may be divided into, *first*, those attended with marked atrophic changes, or wasting and shrinking of the organs; *second*, those in which interstitial pathologic changes destroy the anatomic, secreting elements and function, without diminution in volume of the organ.

Of the first, we have the most marked examples in those cases of imperfect descent or imperfect development of a congenital origin, in ectopic testes. In this class, atrophy is generally limited to one side.

Of the second division, we have enlargement from vascular engorgement, a low grade of hyperplasia or interstitial serous infiltration. When trophic changes of the foregoing description are unilateral, the pathologic changes are in most instances primarily in the blood-vessels and in the veins, the individual has so-called spermatocele, varix, or phlebectasia, the nutrition of the gland is impaired, there is diminished function in proportion to the extent of degenerative changes.

DULCE EST DESIPERE IN LOCO.

THE Hypochondriacs of late
Have formed a sect to suit their state,
And setting reason at defiance,
Have called their twaddle Christian Science.
'Tis not to emulate the saints
They come, but those who have "complaints;"
For this religion first delivers
The elect from piles and sluggish livers;
Their object being to cure their ills
By little prayers instead of pills:
Because all maladies they find
Are situated in the mind,
And so, by steps of logic gentle,
The spot diseased is wholly mental;
A question in pathology
With which all alienists agree:
Who would a trifle further go
And shape the treatment even so.

Among the true believers trace
The people of the Woodcut Race.
Familiar once in daily papers,
But now retired from public labors ;
Where each on pharmaceutic topic
(Pictorially philanthropic)
Exhorted long in language loud
The unreflecting, heedless crowd.

The man who suffered twenty years
From eczema, with them appears ;
And she of zone and visage wide
Who had a pain about her side
For twenty, too, which greatly shocked her,
(She got no comfort from the doctor).
Far now from advertising strife
They taste the sweets of private life,
And having somewhat further back
Dismissed the doctor for the quack ;
They now with wisdom more mature,
And scenting, too, a choicer cure,
The quack in turn have from them hurled
Who brought them first before the world;
And mellowed by religious drivel,
Grow very pious and uncivil.

Those also of catarrhal fame,
Of face diverse and myriad name,
Who were disturbed in their reposes
By too much action in their noses.
And he who Job's own likeness bore
In the oppressive days "Before,"
Now grown obese, with unctuous laughter
Felicitates us with his "After."
And she whose hernia was so loose
A wrought-iron truss was of no use ;
And though the doctor didn't ask it,
She held it two years in a basket :
Which, with occasional atresia,
Entirely occupied her leisure ;
At which (and with some cause, I think,)
Her sainted husband took to drink ;
So often, and at bitter cost,
The sanctities of home are lost !
One dose of the Electric Food
However, did a world of good,
And one week's treatment (and no more)
Was quite sufficient to restore ;
And now, with an o'erflowing soul,
The world shall know that she is whole !
Her consort, too, with joy embued,
Has turned to paths of rectitude,
And ceased (so much could this elate him)
To touch *scale antiquatum*—
Albeit the best electric viands
Are tame compared to Christian Science.

All these, and more of minor tint
Whose names are never seen in print,
Enjoy in peace their endless cures
As long as Christian Science endures.

A superstructure, as you see,
Based on a bastard quackery.
For to the advertising quack
You add a strong religious smack,
Such as the great unwashed determines,
Suggestive of street-corner sermons,
And you will have a graphic notion
Of what makes up this new devotion,
And fairly picture their demeanors
By looking first at their congeners.

Their *raison d'être*, or reason why,
Is to prepare the weak to die;
And for a very little money
They will conduct that ceremony.
Their method needs no nomenclature,
They sit, and sit—and trust to nature.
Occasionally, who can tell!
One of their patients may grow well;
For (lest the thought might give alarm)
Their pious sitting does no harm.
More frequently, without a check,
Death has the patient by the neck;
And eyes grow dark and muscles flaccid,
For lack of, say, carbolic acid:
And pain too great to bear is seen
Because they knew not of morphine.
The reason why the heart may fail is
Because there is no digitalis:
And so on thus, *ad infinitem*,
The drug an unremembered item!
Death is perhaps a fancy, too,
Which skilful thinking might subdue,
But death, to mortals less ideal,
Has always seemed a trifle real.

"Disease is but a whimsy vague,
You dream you have that wooden leg,"
They say, and if you'd hop a bit,
They're sure you would not notice it.
Moreover worms, both long and short ones
Are, they assert, of no importance.
Again (you fill them with amazement)
You have no cancer or displacement!
And why repeat, because unwell,
That fable of the strange hotel?
Bethink, the gonococcus germ
Is but a doctor's idle term,
And when you double up in spurts,
Your mind, but not that bubo hurts.
Cast off these trammels of tradition,
And you will be in fine condition!
Aye, learn to pray, and stop your scratching,
There is no itch (and it's not catching).
"Trust all to heaven," repeats the caller,
"And if you please, a half a dollar."

—E. H. Stafford.

ONTARIO INSTITUTION FOR THE EDUCATION OF THE BLIND.

THE institution to which we are about to direct the attention of our readers is mainly an object of interest in its educational aspects. But when we remember that it is the school of the youthful blind population of the Province, where information may be obtained and statistics collated bearing upon the causes and, to a certain extent, the prevalence of blindness in Ontario, it will be seen that it provides for the profession a field for useful and valuable investigation and enquiry. The Institution for the Blind, at Brantford, is one of the several large establishments of the Province designed by the Government to meet the necessities of the classes of persons, old or young, residents of Ontario, requiring care, or treatment, or education of a special character—the insane, the mentally defective, the deaf and dumb, and the blind. At the institutions for deaf mutes at Belleville, and for the blind at Brantford, maintenance and education, with training in manual industries suited to the pupils' conditions, are provided entirely from the public funds. Pupils from beyond the provincial limits pay a substantial fee. The qualification for admission at Brantford is, that the applicant shall be of sound mind, not suffering from any bodily infirmity (other than blindness), and being not less than six and not more than twenty-one years of age. Any departure from the rule as to age limits must be justified by special circumstances. To reach all those who may need the advantages afforded, the definition of blindness has to be a pretty wide one. Under the conditions already mentioned any are eligible who, by reason of defective vision, are incapable of being taught by ordinary methods. So that the pupils are of all degrees of vision, from the totally blind to the boy or girl who has wrestled vainly and painfully (sometimes disastrously) with the Public School blackboard or "reader," until the patience of the teacher has been exhausted, and the pupil has been turned over to be educated by methods adapted to his or her needs. The value of a liberal interpretation of the rules in this regard has been demonstrated, in not a few instances. There are young men and women to-day discharging all the duties of life as sighted persons, who owe their education and probably the preservation of their vision to the fact that they have been pupils of the Brantford Institution. Hence it becomes, in certain cases, the preserver of sight as well as the school of the sightless. In his address as President of the Association of Educators of the Blind, held at Chautauqua in 1894, Principal Dymond, who has been at the head of the Brantford Institution for the past sixteen years, said: "In 1893 the pupils of the Institution were 132 in number. Of these thirty were totally blind: twenty-six retained a perception of light (nothing more) in one

ONTARIO INSTITUTION FOR THE BLIND.

eye only ; nine had a consciousness of light in both eyes. That is to say, 56 or 49.24 per cent. were blind in the popular sense. The others exhibited all conditions of defective or impaired vision." Among the principal causes of blindness the examining oculist, Dr. Osborne, of Hamilton, gives the following in a school population of 132 : Congenital and lamellar cataracts, 29 ; ophthalmia neonatorum, 21 ; atrophy of optic nerve, 15 ; sympathetic ophthalmia, 10 ; injuries, 7 ; granular ophthalmia, 9 ; other causes, 39. The cases of blindness attributable to consanguinity are, in the experience of the Institution, very few. The most painful feature in the record is the number resulting from ophthalmia neonatorum, which represent 16 per cent. of the whole. In other words, about one-sixth of the cases of adolescent blindness, and those the most complete and absolute, are preventable, if proper measures are taken in the earlier stages of the child's existence. The enquiries of the American Ophthalmological Society, and reports from other institutions for the blind than the one referred to above, substantiate the conclusions drawn from the figures quoted. The attention of more than one legislature has been directed to this subject, and efforts have been made to lessen the evil by stringent statutory enactments. On the whole, blindness appears to be on the decrease. The advances made in ophthalmic surgery of late years, and, what is much to the point, a more intelligent appreciation of the services of the specialist, and the value of the eye infirmary, have had a very diminishing effect both in the prevention of threatened blindness and the partial restoration or improvement of sight. In England, according to a recent writer, there was, in 1871, one blind person in every 1,051 ; in 1881, one in every 1,137 ; and in 1891, one in every 1,235. This means a reduction of 4,102 in twenty years. The fact that the decrease of blindness in children under five years of age amounted in the period named to 31 per cent. points suggestively to the existence of precautions in the direction already indicated, while a decline in the number of blind over sixty-five years of age, to the extent of 27 per cent., speaks loudly of the oculist's successes. Before leaving this part of our subject we shall not, we believe, be mistaken in saying, that nothing in the way of information bearing on the condition of the blind is ever withheld by the authorities of the institution at Brantford from anyone who asks for it.

No one is better able than the physician to understand the injury done to the blind, or otherwise infirm child, by the lack of those opportunities for robust exercise, which so greatly assist the development of the strong and healthy youth. Physical culture, it has been rather tardily admitted, lies at the very root of the training of blind childhood or the healthy expansion of young manhood. This begins at Brantford, first in the kindergarten, where very young pupils go through their initial exercises. It is continued in a well-constructed, thoroughly equipped gymnasium, under a competent instructor, and on scientific principles. The

PRINCIPAL'S HOUSE.

results on both male and female pupils are most gratifying. The agile performances of the former, and the graceful movements and carriage of the latter are noticeable subjects of comment. In literary studies the curriculum at Brantford does not differ materially from that of the Public Schools of the Province. Physical science can, of course, be taught only partially, although good elementary instruction is given in whatever relates to the laws of health, in chemistry as connected therewith, and in physiology. In literature, arithmetic, history, grammar, geography and elocution, the work of the higher classes in a Public School, supplies about the graduating standard. In all these studies memorizing has a very large place. Assistance to some extent is obtained by the use of a dotted cipher, known as the point-print system, which the pupils use with great readiness, and in geography raised sectional maps supply probably the very best method by which not the blind alone, but also the seeing could be most effectually taught. The form of the county, or state, or province taken in the hand, is at once a means of its identification. So, too, the finger traces with almost unerring accuracy the lines of railroad or the courses of rivers, and indicates towns or cities, lakes or mountains. Well-informed visitors often find themselves wanting in knowledge concerning their own county or province, which the blind student supplies without a moment's hesitation. In the study of music the blind find not only a delightful source of recreation but a very important means of livelihood. It is often asked whether the blind have not an especial aptitude for music? The question may be answered both in the negative and affirmative. There is certainly nothing in the mere fact that a boy or girl is born blind, or becomes blind, to favor the possession of a musical ear, or voice, or touch. On the contrary, blindness is frequently the result of causes which affect the general health and vitality and so impair other physical powers. For these reasons the hand and fingers are often limp and flaccid, and need severe bracing, before they acquire the force and deftness necessary to expert execution. But, on the other hand, where the choice of pursuits or pleasures is limited by the personal environment, the mind will naturally address itself to that which is within its reach, and the possession of even limited musical qualities will offer a strong inducement to an effort, which a sighted person, with great possibilities, might not think it worth while to make. So, too, the absence of sight will induce a concentration of undisturbed thought on the work of the moment, and finally, wherever a faculty, such as the sense of hearing and discrimination of sounds is cultivated it will certainly undergo a process of development. Not a few of the pupils of the Brantford Institution have displayed high musical talent, and have taken honors in more advanced stages of their career. The musical course is a very thorough one, both in execution and theory, in vocal and instrumental studies. Closely associated with music is the business of the piano-tuner, which art

THE WILLOW-WORK SHOP.

is taught at Brantford very successfully. The class usually contains about twenty under instruction at one time, and of these two or three graduate annually. The blind piano-tuner has long since made a reputation for himself on this continent. In New York, and also in Toronto, the very finest work in piano-tuning is entrusted to blind men. The industrial employment of the blind is beset with many difficulties, not so much from the initial one of instruction, for a blind man may be taught to do almost anything, as from those which confront him when he enters on the competitive stage of existence and has to face sighted rivalry on the world's cold platform. In Great Britain the problem is solved by the establishment of workshops where, after training in the schools, blind men and women are permanently employed, the shop guaranteeing a stipulated wage and any losses being made up from charitable contributions. Similar workshops are also attached to some of the institutions in the United States. No such arrangements exist in Ontario, nor have circumstances so far seemed to demand them, although the struggle for a livelihood by a blind man is often a hard one. The industry found in Ontario to be the most eligible on the whole, besides piano-tuning, is the willow and cane work. In the manufacture of baskets and chairs, and in chair-seating, a number of pupils at Brantford are always under instruction; a graduate receives an outfit on leaving, and many young men are to-day employed profitably in these industries. Such female industries as sewing and knitting by machine or hand, crocheting, and every kind of fancy work is accomplished by the female pupils with marvellous skill and dexterity. No sighted worker could excel in this line some of the blind girls at Brantford. The site of the institution at Brantford is a very beautiful one, just on the outskirts of the city, and on an elevation overlooking the valley of the Grand River. The spacious grounds afford to the pupils the most abundant means of healthful recreation. The surroundings are particularly attractive, as the illustrations we are able to give will attest.

SEVERAL pleasant opportunities to meet and greet one another socially have been afforded the medical fraternity during the past month. The dinners given by the Trinity and Toronto Schools of Medicine were very enjoyable, and reflected great credit upon those who undertook the arrangement of them.

CANADA has yet to be supplied with *a few* thoroughly well-trained male nurses. No doubt many physicians read some time ago Lady Priestly's article in the *Nineteenth Century*. In it she strongly urged the more general employment of male nurses. "The Hamilton Association," now twelve years in existence, is in a measure supplying the demand for male nurses in England.

REPORT OF DEATHS FROM CONTAGIOUS DISEASES IN ONTARIO FOR THE MONTHS OF OCTOBER AND NOVEMBER, 1897.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Scarlatina.	Rate per 1,000 per Annum.	Diphtheria.	Rate per 1,000 per Annum.	Measles.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum
1,352,886	509	216	0	0	44	0.39	1	0.009	3	0.07	45	0.39	118	1.00
59	68													
NOVEMBER.														
1,385,956	563	221	5	0.04	43	0.4	3	0.02	9	0.08	34	0.3	127	1.10
61	75													

Population of Province 2,263,492

Municipalities of Province 745

The Canadian Journal of Medicine and Surgery

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Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. III. TORONTO, JANUARY, 1898. NO. 1.

Editorials.

A NEW YEAR'S GREETING.

IN presenting our compliments to subscribers at the beginning of the New Year, we do so with the hope that the acquaintance and mutual interest which have commenced to exist between us may prove firm and enduring. As our readers are aware, he who caters for the medical palate, requires a large market to choose from and a sympathy, born of fellow-feeling, to prepare viands for the feast. We know not, indeed, if a kind genius has always presided at the

selection and preparation of our offerings. That they have not sometimes displeased, we hope; that they have always been acceptable would be too much to expect. We shall endeavor, however, to merit approval by placing the cultivation of the science and art of medicine in the first place, with the honor, dignity aud advancement of our beloved profession a close second.

As the efficacy and influence of a medical journal depend largely on suiting the special tastes of its readers, it follows of necessity that the more important work will be found on the pages devoted to the several departments. We owe a debt of gratitude to our collaborators for the energy they have displayed in providing a bountiful repast of good things, and we acknowledge that the success attained by this young journal has been largely won by their painstaking exertions.

To contributors who have honored us with their papers, we extend our hearty thanks. But being insatiable, we still cry "more, more," feeling quite sure, however, that any demands a monthly may make will produce no appreciable drain on the surplus of Canadian medical talent.

To one and all we offer our kindest good wishes for a new and profitable year.

J. J. C.

REPORT OF THE REGISTRAR-GENERAL OF ONTARIO FOR 1896.

In perusing the statistics of this valuable report, it is gratifying to a medical journalist to note that in the banner province of the Dominion contagious diseases have notably declined in recent years. The returns of the past fifteen years, during which the Provincial Board of Health has been in operation, have been tabulated in the report of 1896 in five-year periods, the figures opposite the second and third periods indicating the decreases, as compared with the first period.

Periods.	Smallpox.	Scarlatina.	Diphtheria.	Typhoid.
1882-86 ..	100 p.c.	100 p.c.	100 p.c.	100 p.c.
1887-91 ..	88 p.c.	67 p.c.	6 p.c.	no decrease.
1892-96 ..	93 p.c.	50 p.c.	6 p.c.	46 p.c.

The decrease of 46 per cent. in deaths from typhoid during the third period is of especial interest. With a system of public waterworks in at least 100 places, the former difficulty from

polluted water has been removed to a certain extent, with a great consequent advantage to the health of the communities. All of these waterworks systems are subject to the inspection of the department.

The death-rate from diphtheria in Ontario, with a population of 2,263,422, is also decreasing, the rates being as follows: In 1894, 1,075, or .5 per 1,000; in 1895, 942, or .4 per 1,000; in 1896, 925, or .39 per 1,000; almost as low as the .32 rate of England, and lower than the .71 rate of Massachusetts for the same year. This decrease is all the more noteworthy in view of the fact that owing to the more frequent resort to a bacteriological test in making a diagnosis, cases of diphtheria were reported in 1896, which, had they occurred in previous years, would have been classed as non-contagious, follicular tonsillitis or croup.

While attention to isolation in dwellings and a resort to hospitals for contagious diseases have tended powerfully to limit the spread of diphtheria, it must be admitted that the liberal use of anti-diphtheritic serum during the last three years in Ontario has enabled practitioners to obtain results never before procurable either in a prophylactic or therapeutic sense. As a further indication of the extraordinary influence of anti-diphtheritic serum in reducing the death-rate from the disease in question, we may refer to the Massachusetts report on vital statistics for 1896. It is stated therein that in the cities and towns of that State, for the years 1892, 1893, 1894, when antitoxin was not used, the total mortality (average) from diphtheria, compared with reported cases, was 28.3 per cent., but in 1895, when antitoxin began to be used, the percentage of mortality fell to 18.9 per cent., and in 1896 to 15.1 per cent.

The report showing deaths from tuberculosis in Ontario is not favorable, the mortality from that disease in 1896 being 2,758 persons or 11 per cent. of all the deaths from all causes. In the thirteen cities it shows a percentage of 13.3 per cent. of all causes. While Ontario compares most favorably with all other States and countries in temperate climates, nevertheless this mortality seems lamentable. In a further table, in which the counties of the Province are divided into groups, the most important and interesting fact is illustrated that in certain counties year after year a high absolute mortality from this disease prevails. The new districts, Algoma and Muskoka, show a most satisfactory immunity. The Lake Huron and central counties come next in their relative

freedom from its ravages, while those on Lake Ontario, the St. Lawrence and the Lower Ottawa are notably the highest.

The table showing the monthly returns of deaths up to October, 1897, which is obtainable under the new Act, shows that every month the total deaths recorded from consumption amount to more than double the deaths recorded from scarlet fever, smallpox, measles, whooping-cough, diphtheria and typhoid combined.

In view of these facts, it is incumbent on local boards of health and private individuals to procure the disinfection of dwellings in which cases of tuberculosis have been treated. And further, while there may be an objection to the enforcement of municipal regulations prohibiting expectoration on roads and sidewalks, there is good evidence to show that washing of floors and walls in factories, school-houses, street-cars and other places of public resort would materially aid in lessening the mortality from tuberculosis in Ontario by reducing the amount of active contagious material which is now allowed to circulate as freely as the dust. J. J. C.

VICTORIAN DISTRICT NURSES.

THE following is a despatch which appeared in the *Mail and Empire* of Dec. 16th:

"BUFFALO, Dec. 15th.—Dr. Renwick R. Ross, superintendent of the Buffalo General Hospital, recently communicated with Immigration Inspector De Barry to ascertain whether it would be a violation of the law to import young women from Canada for the purpose of training them as nurses at the hospital, provided the young women were willing to work during their training course without remuneration excepting their board, clothing, washing and instruction.

"Inspector De Barry, in replying, stated that, in his judgment, such action on the part of the hospital management would be clearly a violation of the alien contract labor law, and that if the young women were brought here, as the superintendent suggested, suits could be instituted for the recovery of a penalty of $1,000 in each case, and for the deportation of the aliens brought in. The statutes, the inspector said, make no discrimination in the matter of money payments for the services of imported aliens.

"The nurses at the Buffalo General Hospital for some time past have been largely composed of young women from Canada."

. . . . . .

"At a meeting of the Provisional Committee, Her Excellency the Countess of Aberdeen announced that it is the intention to

begin the practical work of the order early in the new year. In Montreal the scheme is already well advanced. Halifax, Vancouver and Regina are also ready to make a start. It is proposed to begin in a small way, and, as far as funds will permit, so that citizens will have an opportunity of viewing the work and judging for themselves of its utility. Miss McLeod, of whom Dr. Worcester spoke so highly, has volunteered her services for three months, beginning in January; and Miss Peters, superintendent of the London Jubilee Victorian Nurses, will also come to Canada to assist in launching the order into active service."—*Mail and Empire, Dec. 18th.*

The foregoing clippings will give the readers of this Journal some idea as to why some members of the profession have been and are insisting that none but Canadian nurses should be employed in the proposed scheme of the Victorian District Nurses. It looks as if the Canadians would have to play second fiddle, notwithstanding the fact that one Toronto doctor asserted that none but Canadians would be employed because "Her Excellency told me so."

Recently Her Excellency the Countess of Aberdeen courteously called a meeting of Toronto doctors to discuss her scheme with Dr. Worcester, of Waltham, Mass. During the progress of that meeting one could hardly mistake the sentiment of those present, and when a resolution was suggested it was at first ruled out of order by the chairman of the meeting, Dr. Jas. Thorburn—who, by the way, is President of the Ontario Medical Council, and the action of that body last June is still fresh in the minds of the profession. Finally, after expressing thanks to Dr. Worcester, the meeting broke up. Within ten days His Excellency, speaking at the medical banquet of the University of Toronto, expressed the hope that the profession here would soon be unanimous now that the "leaders of the profession" have taken the matter up. It might be interesting for His Excellency to learn that some "leaders of the profession" are still trying to turn the matter down, and that they are acting from sincere motives.

It is unfortunate that the promoters of the scheme did not display more judgment at the commencement by quietly sitting down and asking themselves, Is this thing necessary in Canada? And then is it workable? Finding themselves unable to give practical answers, because of their high social position, they could then have appealed to the various existing charitable organizations and to the medical profession. By so doing they would have had the counsel of those well used to dispensing charity, and would have

had the advice of the "leaders of the profession" appointed by the various medical associations. Thus the original objectionable pamphlet would have been avoided, as well as the resulting distrust that still exists in the minds of the public and the profession as to the real motive underlying the scheme—a distrust that will take months to remove—yes, it will even remain when the scheme has been abandoned and is a thing of the past. This reflection brings sadness when one thinks of what might have been.

It is natural now for one to ask, what are some of the "might have beens?" With a fund like the one proposed, the debt could probably have been wiped off most, if not all, of the existing hospitals, thus making free beds a real possibility without making a drain upon the provincial and municipal treasury.

"Houses of peace" might have been established for the reception of poor, but respectable people, who are suffering from wasting diseases, where they could be taken during the last few weeks of life to receive tender care and luxuries that their means would not permit.

A fund might have been placed under the control of two or three responsible trustees from which nurses, employed by people of moderate means, could obtain the balance of what is considered reasonable remuneration, upon proper representation to these trustees. This would give more employment to the nurses and would enable a deserving class in the community to avail themselves of the advantages of trained nursing. Neither would it interfere with existing charities, nor cause an influx of nurses from across the border, or tend to pauperize any class of people.

There are many nasty things that one might say about the proposed scheme, for even in its present shape it has many objectionable features, and some questionable things are still doing to promote its progress. But perhaps it is better to leave these things unsaid, in the hope that those engaged in its promotion will rise to a sense of their responsibility and do what is right toward the poor, the needy, the hospital, the nurse and the physician.

S.

YELLOW FEVER IN JAMAICA.

THE Government of Jamaica are taking steps to deal effectually by preventive measures with the occurrence of yellow fever in this island. On October 12th a proclamation was issued declaring Law XV. of 1897 to be in force in certain parishes. Kingston has

been divided into four districts, and several officers, to be called sanitary visitors, have been nominated to make a house-to-house inspection and to report to the health officer of Kingston, who is given special powers to visit and inspect all lodging houses, hotels, and dwelling houses and their premises. Further, the duty of notifying cases of infectious diseases occurring in a dwelling house is placed upon the occupier.

If properly carried out, these regulations ought to have a reassuring effect on public opinion; but, to check the disease promptly, the attending physician should be obliged to notify as well as the occupier. Dual notification of contagious disease works well in Ontario and ought to give satisfaction in Jamaica, especially as a severe disease like yellow fever usually calls for prompt medical attendance. There are, to be sure, certain difficulties in the way, as when a practitioner is unable to diagnose the disease when called to see a case in the first stage; but this difficulty applies to the diagnosis of other contagious diseases as well, and, as Flint says in his article on Small-pox, "simply shows the necessity of having the diagnostic points of the disease fixed in the memory, as, in view of the danger of the diffusion of the disease by exposure before its character is ascertained, an early diagnosis is immensely important." If in doubt the practitioner should give the friends of the patient and the public the benefit of that doubt. Should the question of contagion be decided affirmatively, there will not then be quite so many suspects to isolate. Assuming that isolation is attempted, it ought to be carried out in a humane manner, for a suspect has rights, and if, in the public interest, he is deprived of his liberty he should not be exposed to unnecessary discomfort or extreme peril.

We have received from an esteemed correspondent and subscriber, who practises in Jamaica, some clippings from local newspapers giving the details of a method of isolation which would seem to have been of great severity and extreme fatuity as well.

It appears that on November 5th, 1897, Miss Myers, the assistant postmistress at Shooter's Hill P.O., near Kingston, died of yellow fever after a few days' illness. The disease had been pronounced to be "bilious remittent" by two physicians, and her parents and several friends were gathered together at her bedside. Shortly before death the attending physician said that it was a case of yellow fever. The house in which Miss Myers died is a small, two-storied building, containing four rooms, each 10 feet

square. The D.M.O locked the door of the house and refused egress to the eight persons who were in the building. The bush surrounding the house was cleared off and burned and the house and grounds disinfected with burning sulphur. During the ten days these persons were kept indoors three of them sickened and were treated for yellow fever in the same house. Of the eight inmates six contracted the disease and one died.

A review of this case shows the absurdity of isolating bona fide suspects in a collective group. Admitting that the sulphur fumigation had destroyed the contagion in the building itself, each of the eight persons was a possible case of yellow fever and therefore dangerous to the others, even if they had all been allowed to live comfortably in a mansion instead of being huddled together in a shanty. Complete isolation could have been cheaply obtained by placing each suspect in a separate tent until the period of incubation, viz., two to fifteen days, had elapsed. It may be that, owing to the heavy rainfall prevailing at that time, the D.M.O. thought that the prisoners would be more comfortable in the house than in tents or huts. This, however, is no excuse, for when a sanitary authority undertakes to practise isolation, an hospital, even if it is only a tent, should be provided for the sick, and suitable quarters for suspects. We fear that conduct such as we have just detailed will do harm by exciting the Jamaica people to oppose preventive measures instead of giving them their sympathy and support.

J. J. C.

THE VAPOR BATH.

In a recent issue we took occasion to refer to the necessity existing in Toronto for a system of public baths. For five hundred years Ancient Rome, we learn, had not a physician but the priest, the laity and the bath. The Romans were noted for their strength, and lived to a ripe old age. As formerly we dealt entirely with the baths suitable for those physically strong, and simply as a sanitary measure to ensure the continuance of health, we now refer more especially to the hot vapor bath as a therapeutic measure and a valuable agent in the treatment of the sick. Many persons will declare that they never perspire, but, of course, that is not true, as there is constantly going on a process of almost insensible perspiration, such being one of the inexorable laws of health. As a rule the laboring classes by profuse perspiration, occasioned by

their occupation, keep the sweat ducts free from obstruction. With the leisure class, on the other hand, daily exercise, so necessary to health, is neglected, and consequently the pores of the skin become clogged, and even an ordinary warm bath is quite insufficient to restore the skin to its normal state of activity. The result is that every autumn, at least, there takes place an exodus to the various Sanitaria and Hot Springs—sometimes quite a distance away from home—where the panacea for almost all the ills that flesh is heir to, whether imaginary or real, seems to be the bath in its different forms, and which, combined with the pure air, favorable surroundings, as well as congenial company, in many cases restores the individual to normal health. There is another class of persons who come under the notice of the busy practitioner, those who, owing to the expense involved, have to remain at home, although similarly afflicted. In the cities, of course, the public Turkish baths are a great boon, but in towns and villages where they are not procurable, the cabinet vapor bath seems to be a most successful method for the home treatment of cases requiring free, and, in many cases, a rapid loss of moisture by the skin. We understand that last year a large number of vapor baths were introduced into the University of Pennsylvania with most beneficial results to the students, who, as a class, are apt to neglect that, owing to their sedentary lives, it is quite necessary to keep freely open nature's chief emunctory. W. A. Y.

MEDICAL ELEEMOSYNARY INSTITUTIONS.

In our issue of November, 1897, we published an article descriptive of the buildings and grounds of the Orillia Asylum for Feeble-minded Children, together with an account of the methods of instruction pursued there in improving the physical and mental status of that class of patients.

We propose to present a series of articles descriptive of the Ontario eleemosynary institutions, particularly those in which results are obtained which have a bearing on the art and science of medicine. In the current number, we are fortunate in being able to publish an article, descriptive of the therapeutic and educational work done at the Ontario institution for the education of the blind at Brantford.

The four illustrations which accompany the text, and for which

we are indebted to the courtesy of Principal Dymond, will, no doubt, add to the pleasure of our readers, enabling those who have not visited Brantford to form some idea of the extent of the buildings and grounds.

Physicians, particularly obstetricians, will observe that in the Brantford institution 16 per cent. of the cases of blindness result from ophthalmia neonatorum.

In May, 1897, we published an article in this journal, showing the advantage of adopting prophylactic measures in treating the eyes of new-born infants. We quoted the opinion of Dr. Valude, of Paris, who has made a practical study of this question, and prepared a statistic of the results obtained in his obstetric service, in which favorable mention is made of the application of a 2 per cent. solution of nitrate of silver to the eyes of each infant immediately after birth. As this author says: "When done immediately after birth, before the umbilical cord has been severed, the proportion of cases of ophthalmia is reduced by one-half, and the statistic is twice as favorable as it is in cases in which the little operation is delayed."

Dr. Valude's opinions and practice throw a brilliant light on one of the causes of preventable blindness in Ontario, and should induce our accoucheurs, among their many different duties, to make an effort to reduce the rather alarming percentage of total blindness caused by ophthalmia neonatorum. J. J. C.

THE VICTORIAN ORDER OF NURSES, REQUIESCAT IN PACE.

LIKE refractory children the medical men of Toronto have been patted on the back and told "You don't know what is good for you, my dears," and down their unwilling throats has been poured the nauseating medicine labelled "The Victorian Order of Nurses," several doses daily and a double spoonful at dinner time.

> "Theirs not to reason why,
> Theirs not to make reply,
> Theirs but to —— *swallow.*"

To prove the efficacy of this medicine, a stranger has been within our gates, an estimable physician we do not doubt, but to Canadians only a strolling gipsy, here to-day, and a dweller in the

kingdom of Uncle Sam to-morrow. If only to prove the truth of the statement that "other people's business interests us, our own business bores us," we would like to ask if the esteemed doctor measured the portion he offered the Canadians with a *silver* spoon?

We have not felt the necessity of purchasing this highly recommended medicine, as we believe our storehouse to be *full of the article to overflowing;* but along came Anthony Hope Hawkins, and graciously declared he would contribute some of the money needed to purchase a large supply. And so he lent the music of his voice to coaxing the child of his brain "Dolly" down from the book-shelf, and they talked to the stake of a necessary million. When the hour was over, we fancied we heard Dolly say:

"'Will this hour *count*, Mr. Carter'?
'That would be rather strict,' said I."

Meanwhile Br'er Fox's thoughts are almost too deep for words. He muses, and his thoughts are of the day when famine shall return to this city, and on emptier stomachs, but with clearer brains, the dear medical children shall endeavor to take their medicine again daily, and to be continued *ad libitum*, bottled, corked and labelled by an Englishwoman called "Nurse," imported for the purpose. Then, amid his musings, Br'er Fox sees a great funeral procession, and the obnoxious medicine buried under the head-stone of common-sense, and we hear him say,

"'Who'll buy the flowers?'
'I'll buy the flowers.'"

And through the winter-stripped branches of the maple trees the wind whispered, "It is well." W. A. Y.

ULTRA-SABBATARIANISM.

The daily press has been full of letters discussing Sunday recreation, occasioned by the leaving open free, recently, during one Sunday, of the chrysanthemum show. As medical men we consider this action a very commendable one, and a great boon indeed to the poorer working classes; everything that is beautiful, and especially the direct handiwork of the Great Artist, tends to develop the moral life, and so indirectly the healthy physical life of the great mass of the people. When Bishop Vincent, of the United States, organized his great Chautauqua scheme, he emphasized

strongly the idea that rest is not necessarily inaction, but rather a change of occupation.

Even of austere Calvin, it is said he played at "skittles" on Sunday after the services of the church. Macaulay in his speech on the Factory Act made a very strong appeal for the rest day. But Charles Kingsley struck the key-note of harmony when he counselled his own sons not to play cricket on Sunday because they had much leisure for amusement during the other six days, but urged the village lads to participate in the game because of their lack of time for recreation during the week.

What is generally termed the religious portion of the community, we fear are too rigid in their ideas of Sabbath observance. They insist upon regular attendance at the services of the Church, but quite forget to imitate old Sir Roger de Coverley and send a hassock, prayer-book and singing master around to induce the attendance of the class that are "work tired." Let the poorer among us begin to feel the beauty in nature, and the perfection that may be attained by cultivation; give the poorer brother a chance intellectually, and he will attain unto a chance physically and morally. Even the great shaggy "mums" may teach him that he is not a creature of environment but of infinite cultivation and development.

W. A. Y.

CIRCUMCISION.

At the congress of French urologists, which met at Paris last October, Dr. Guiard discussed the operation for circumcision under the two heads of the rapidity of healing and the elegance of the final result. He did not consider the operation successful unless union was complete, without any separation in the entire extent of the wound, without crusts or suppuration, after the second day, excepting, of course, cases in which adhesions were present. He also thought that enough of the skin of the penis should be preserved to make a kind of foreskin, so as to cover the base of the glans penis and conceal all traces of the operation. Dr. Carlier stated, that for two years back he had not used chloroform or ether in a single case of circumcision. He acknowledged that cocaine had serious drawbacks, but said they were not noticeable in this operation if it was injected at the base of the penis. The resulting analgesia is then complete except at the frænum præputii.

J. J. C.

A STEP IN THE RIGHT DIRECTION.

LOOKING at the unusually large display of handkerchiefs in the shop windows of our city awaiting to be purchased and to take their places as the conveyers of "best wishes for a merry Christmas," we thought involuntarily of the article by Julia W. Carpenter, M.D., appearing in the current issue of the *Woman's Medical Journal*, of Toledo. Although it seems as though evolved out of a thought of Bellamy's expressed in "Equality," we give Dr. Carpenter's idea as a very good suggestion:

"A handkerchief should be made of some inexpensive material, and when used it should be cremated." . . . Handkerchiefs could be made of some material so inexpensive that their use and destruction would cost no more than their laundering. . . . The standard of the physician should be absolute cleanliness or asepsis in every-day life, and not just in times of sickness. In the domain of surgery we have been taught our lesson in asepsis. One familiar with surgery only before the days of antiseptics would deem the results of the present day incredible. In a similar manner, if some of the customs of the present day could be changed to what might be called aseptic living, the results would be equally marvellous." W. A. Y.

THE PASSING OF THE OLD PROFESSOR.

As the hands on the dial of the clock of the years marked the half century, the old Professor said "good-bye" to the class-room. Faithfully and well during all the fifty years did James H. Richardson discharge his duties. Who of us can forget his inimitable description of the anatomy of the hip-joint? We who are in the hurry and rush of life pause a moment to pay our tribute of praise to one to whom honor is due. And now in the eventide of his life he leaves the burden to be borne by other shoulders, and surrounded by every comfort in his quaint home, almost one of Toronto's landmarks, we leave him to enjoy his well-earned rest. W. A. Y.

OF PASSING INTEREST.

MANY busy practitioners have enjoyed "Hugh Wynne, Free Quaker," as it appeared in serial form in *The Century*. Now it appears in book form, we think the more enjoyable way to read it,

as a dreary "to be continued" does not greet the interested eye of the reader. Dr. Weir Mitchell, the author, is a joy to contemplate, strong physically and fond of athletics. The keen intellect, the strong, human sympathy, crowned with the wealth of knowledge of the student, the busy practitioner, and later in life the ardent specialist, a strange blending in one splendid old man, unbowed by his weight of seventy years.

THE conversazione of the Woman's Medical College held this year in the Education Department of the Normal School building, proved very successful. The programme was short and well rendered. The room devoted to the exhibit of the Toronto Society of Artists formed a charming background for the informal reception held by Dr. Augusta Stowe-Gullen, assisted by several other ladies.

A CONCERT in aid of a home for the nurses in connection with the Western Hospital, was given in St. George's Hall. The audience filled the hall to overflowing, thereby showing great appreciation of the efforts of those on the Board of Management of this comparatively new claimant for support among the city's many deserving institutions.

A THIEF recently visited the back yard of a Dundas Street doctor and stole four rabbits. The thief did not know it, but it is a fact that the rabbits were inoculated with diphtheria germs. Any one foolish enough to contract the disease in the near future will be regarded with suspicion.

IN its soft blue dress bordered with silver, our esteemed exchange, the *Medical Times* (New York), for December, comes looking very fair after twenty-five years of the rack and toil of life in a literary sanctum. We extend sincere congratulations.

THE *Medical Record's* special number of November 27 greets us in a handsome cover, and amid a shower of snowflakes we read of the sunshine and beauty of the numerous winter resorts so well described therein.

WE learn that the St. Louis journal entitled the *Laryngoscope* will be published also in Bristol, England, by Messrs. John Wright & Co., beginning with the issue for January, 1898.

WE welcome a new exchange to our list, the *Western Medical and Surgical Gazette*. It is full of good material and has a very strong connection.

W. A. Y.

Obituary.

Dr. J. H. Gardiner, who died at London, Ont., of blood-poisoning, November 1st, at the age of forty-seven years, was a native of Stirlingshire, Scotland. He studied medicine at the Toronto School of Medicine, graduated as M.B. Toronto University, and M.C.P.S. Ont., in 1878, and began practice the same year in London. He was for many years a member of the Local Board of Health, and in 1888 occupied a seat in the City Council. As one of the Surgeons of the City Hospital, a member of the Medical Faculty of the Western University, and a successful practitioner, he was deservedly held in the highest esteem. He was a genial, warm-hearted man, and his death, at a comparatively early age, is deeply lamented by all who had the pleasure of his acquaintance.

J. J. C.

We regret very much to be obliged to record the sudden death of Dr. James H. Burns, which occurred on the 20th ult., at his residence, 7 College Street. He died of heart disease, and the summons was not unexpected, as he had had premonitions for some time previous. The deceased was born at Oshawa, in December 1845, and received his early training at Upper Canada College. He graduated as M.B. at Toronto University, in 1866, and during the Fenian invasion of that year saw military service as assistant surgeon of Lieut.-Colonel Denison's provisional regiment. He subsequently settled at Collingwood, where he practised for ten years. He removed to Toronto in 1876, and was actively engaged in professional work up to the moment of his death. In 1880 and 1885, Dr. Burns was elected a member of the Medical Council of the College of Physicians and Surgeons of Ontario. He obtained the highest honors of this representative body, being chosen its Vice-President in 1887, and President in 1888. A vacancy having recently occurred in the constituency he formerly represented, owing to the resignation of Dr. Machell, he again contested the seat, and his election was declared two hours after his death had taken place.

At the time of his decease Dr. Burns was senior consulting physician at the Infants' Home, a member of the consulting staff at St. John's Hospital, consulting physician to Toronto General Hos-

pital, and a member of the Military Medical Board, No. 2. He was medical referee for Ontario of the Mutual Life Insurance Company of New York, and medical examiner for several other life insurance companies.

A very large concourse of physicians and prominent citizens assembled at the funeral, to show their respect to the memory of the deceased. J. J. C.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

DIPHTHERIA AND ITS TREATMENT.

To the Editor of The Canadian Journal of Medicine and Surgery :

Dear Sir,—Diphtheria is a self-limited disease of specific origin. If auto-infection can be prevented the efforts of nature will, unaided, effect a cure, but if the products of decomposition containing the specific poison of the disease (whether we believe this to be the Klebs-Loeffler bacillus or the ptomaines produced by it) are allowed to enter the system the disease increases in virulence, the powers of resistance are weakened and the victim dies. The Klebs-Loeffler bacillus may be, and often is, found when there is no constitutional disturbance, no diphtheritic deposits, or any other evidence of diphtheria: therefore, a perfectly healthy throat is immune to diphtheria: in addition to receiving the virulent Klebs-Loeffler bacillus in the respiratory passages they must be in a condition favorable to the development of the disease.

Many remedies and methods of treatment have been advocated and used since Bretonneau, in a work published in 1826, gave an account of his experience with diphtheria. The disease had been known and described before his work appeared, but from this time dates the copious modern literature upon the subject, as well as the name by which it is now known. Different opinions as to whether it was primarily a local or a general disease led to numerous theories as to methods of treatment for prevention and cure of diphtheria.

"Theoretically, a remedy to be successful in the treatment of diphtheria, should be one which would be constitutional as well as local in effect. It should be destructive to the specific cause as found in the diphtheritic deposits, prevent decomposition of the

diphtheritic membrane and destroy or prevent formation of the ptomaines which cause auto-infection. But before treatment has been commenced there may have been a greater amount of diphtheritic poison in the system than nature unaided is able to destroy. The remedy, must, therefore, be a constitutional as well as a local one, so that entering the system it may assist nature in her efforts to destroy or neutralize the poison already there. Such a remedy would be an ideal one and should, in my opinion, meet the requirements necessary for the successful treatment of diphtheria."

Although different remedies and methods of treatment were used and wonderful cures reported by enthusiasts, who for a time believed that they had found a specific for the much-dreaded disease, local applications and internal medication all failed when brought to the crucial test, virulent diphtheria too often ended in death. Antitoxin, by some considered a specific for the disease and by others as not only comparatively useless, but dangerous, is the latest addition to the list of remedies used for the cure of diphtheria. While the records of cases treated with antitoxin by different parties vary very much as to the percentage of recoveries, yet on the whole it appears to have materially lessened the death rate in diphtheria. In order to obtain good results, it must be used the first or second day of attack, and all agree that after the third or fourth day it is of little value. In cases of mixed infection, so common in very malignant cases, it is never of much value.

Among the remedies which have been successfully used in treating diphtheria, chlorin in solution and by inhalation proved to be one of the most useful. Solutions of chlorin could not be made powerful enough to obtain the full effect of the remedy, and the vapor (the most effectual way of using it) could not be inhaled except in minute doses, as it excited cough and a sense of suffocation, and, if persisted in, produced spitting of blood and violent pain. Diluted so that it could be safely used, many physicians found it more effectual in some epidemics of the disease than any other remedy and most of them hold that if it was possible to use chlorin, so as to obtain the full therapeutic effect, it might prove to be a specific for diphtheria.

As solutions of chlorin could not contain a large enough percentage of the active agent to be very effective and were merely local in their action, I became convinced that in the vapor must be found the remedy for diphtheria. After numerous experiments with different substances intended to correct or destroy the irritat-

ing and suffocating qualities of chlorin, without impairing its antiseptic properties, all of which failed when put to practical use, I at length succeeded, January, 1893, in discovering a combination which did not lessen the antiseptic properties of chlorin and completely eradicated or corrected its irritating and suffocating qualities. Since then I have had many opportunities of testing the value of the combination clinically and the results justified the opinion, that chlorin vapor, deprived of irritating and suffocating qualities, is as near a specific for the cure of diphtheria as it is possible for a remedy to be for that or any other disease. I have been unable to obtain full returns from all physicians who have used the remedy, but the results, so far as I have learned, in the practice of other physicians and in my own practice, show a death-rate of less than three per cent., although the remedy was used in a number of cases as a last resort after other remedies had failed and death appeared to be imminent. As a prophylactic, it has proved to be very efficient in numbers of cases where persons were exposed to the disease and as a preventive used the inhalations several times a day, complete immunity was established, not one who was exposed and used the remedy having been attacked by diphtheria.

Being used by inhalation the remedy has not only a local, but a general effect, as the vapor enters the lungs, passes into the circulation with the oxygen and assists nature to destroy the systemic poison. The remedy is very simple, easy to use and absolutely safe, no unfortunate sequelæ or harmful results follow its use. Theoretically, if chlorin gas, corrected, should prove to be a good remedy for diphtheria, it would also prove to be an effective remedy for other diseases of the respiratory organs of a microbic nature. Practically, it has proved to be such a remedy, as it has been very successfully used in asthma, pneumonia, hay-fever, bronchitis, laryngitis, whooping-cough and consumption. Used with appropriate supportive and constitutional treatment it has proved to be remarkably efficient in the earlier stages of consumption. In hopeless cases its use gave great relief to the sufferer.

The remedy consists essentially of chlorin deprived of its irritating, suffocating qualities by an emollient corrective. Its action is cooling, soothing and pleasant: the results are destruction of microbes, prevention of putrefactive changes, relief of local inflammation and lessening of the general temperature, if there is fever.

If the remedy is made of good materials, properly combined, the results will be very satisfactory: if poor drugs are used or they

are not properly combined, the results will be very disappointing. The value of the "corrective" is not so much due to the agents used as in their proper combination.

The formula of chlorin bactericide which has been so successfully used in the treatment of diphtheria and throat and lung diseases is as follows:

FORMULA OF CHLORIN BACTERICIDE.

Solution No. 1.

Solution of Zinc Chlorid	20 parts.
Solution of Arsenic Chlorid	30 parts.
Hydrochloric acid, pure	1 part.
Water	49 parts.

Solution No. 2.

Solution chlorinated soda, standardized to 2.6 per cent. available.

Chlorin	70 parts.
Corrective	30 parts.

The corrective consists of menthol, camphor, eucalyptol and salacylate of methyl dissolved in alcohol and water. Directions: five teaspoonfuls of No. 1 and one teaspoonful of No. 2 are put into the inhaler and inhaled four or five minutes at a time, once an hour, for diphtheria and pneumonia, and once every two or three hours for other diseases. For diphtheria and pneumonia one teaspoonful of No. 2 is added every four hours: every twelve hours the inhaler is emptied and refilled. For severe cases of diphtheria or pneumonia the remedy should be used day and night until there is well marked improvement, after which it is not necessary to use it at night. The inhaler should be slightly warmed before using. For diphtheria other medication may be used, but is not needed.

It is the opinion of all physicians who have used it in their practice that chlorin bactericide will not cure every case of diphtheria, but that no other remedy will cure so large a percentage of cases.

Very truly yours,

P. M. BRACELIN, M.D.

"SUNNY SOUTH."

To the Editor of The Canadian Journal of Medicine and Surgery.

Dear Editor,—In my last I was essaying to prove that the "Doctorinen" could scarcely expect to keep pace with her male competitors—the doctors. Your accomplished editor in the pediatric department will think that retributive justice, like in the case of Jonah, has followed me, for the first one to act as guide and legal adviser in my new home was a lady lawyer. If the "Doctorinen" in Toronto could have seen how meekly and humbly I took advice from feminine lips, they would have enjoyed the joke immensely. Like our own "Doctorinen" the lady lawyer was a splendid type of womanhood. So my dose was easily taken. However, I soon betook myself to the offices of the doctors. These I found to be a jovial, courteous lot, and not only willing to welcome a stranger, but to answer innumerable queries about this country as a health resort. They certainly hold very high opinions of its virtues, and certainly my experience and observations verify all they say. The weather throughout winter compares, for warmth, rain, bright, balmy sunshine, with our best June days. The nights with May and September. The summer, though perhaps somewhat hotter than ours, is moderated with cooler nights.

For scenery, nature, art and wealth have combined forces. Miles on miles of the richest orange orchards, just burdened with large, luscious fruit just ripening. An endless variety of the prettiest flowers blooming all the year round. All kinds of fruit in almost prodigal profusion, and every manner, shape and form of semi-tropical shrubs, shade-trees, etc. Patients are so fascinated with the scenery in every direction that they soon forget all about their infirmities. It is a poor place for doctors, for patients get well so quickly that practice does not pay. The result is, doctors soon take to cultivating orange groves, and in four or five years loom up as millionaires. They are then so popular that, like our Cameron, they find an M.D. cuts no figure, so they quietly ignore or suspend it and simply designate themselves as John Brown, Esq., Luconia Grove, etc., etc. However, as I was so thoroughly imbued with the dignity *et al.* of our profession at Montreal meeting, I shall continue to walk therein, remaining as hitherto an entire stranger to any of the enticements of wealth.

Redlands is one of many lovely towns in Southern California,

and up-to-date in every way. Patients coming here can enjoy everything that an ideal climate, delightful scenery, good and reasonable (rates) accommodation, and efficient medical skill can provide. Of course, you can easily understand how the last can be procured. Now, a vice-president of Toronto Medical Society, member of the Western Hospital staff, and perhaps, above all, an out-and-out supporter of Spence for Medical Council, should certainly make up any deficiency that could exist in medical ranks here. Yours truly,

J. Hunter.

Redlands, November 24th, 1897.

"VICTORIAN ORDER OF NURSES."

To the Editor of The Canadian Journal of Medicine and Surgery :

Sir,—When, at the Ontario Medical Association meeting in June, the subject of the "Victorian Order" for providing District Nursing was discussed, I was in full sympathy with the resolution passed by the Association in respect to that subject. Why? Because the object of the nursing project, from having been misunderstood, and perhaps in a measure unwittingly misrepresented, I was under a false impression in respect to it.

Since Dr. Worcester, of Waltham, Mass., who has made a special study of the subject both in Europe and America, and has had much practical experience in district nursing amongst the poorer classes in Massachusetts, has been in Ottawa and explained the working of such a system and its most excellent results, my views have changed; as also, I particularly desire to state, have the views of a number of the medical practitioners of this city with whom I have had converse on the subject.

To be brief, three special advantages may be named as almost certain to result from the proposed nursing scheme if carried out, as follows:

First.—It would be a decided advantage (rather than a disadvantage) to our already somewhat considerable army of regular nurses, by increasing, probably in a little time quadrupling, the demand for these "ministering angels."

The new order of nurses would go forth amongst the sick and distressed of the poorer classes, *visit* them, only, say for an hour or so (never remaining, as for a day or a week), for a small sum paid to the Home, not to the nurse.

One of them would be sent out, say, to a woman at the commencement of labor, by the physician engaged; she would take the place at the bedside and in the room of the very incompetent neighbor or friend, or even mother, of the patient, now commonly in attendance. With a knowledge of the requirements of the case, with kindly sympathy, tender and *clean* hands, she would arrange everything for the comfort of the patient, the prospective baby, and also for the coming physician: and in the best possible manner, very different from that in which they are now commonly arranged, sometimes providing from the Nurses' Home certain necessaries not obtainable in the patient's house.

If properly chosen or selected, as naturally adapted to this sort of semi-mission work, the district nurse would bring such a stream of sunshine (really and figuratively, with fresh air), such confidence, cheerfulness, hope and comfort, as would not only produce a favorable individual effect on the patient, but cause her family and neighbors to make great efforts on other occasions of the kind to employ a regular outside nurse for some days or a week or two, in order to have the benefit of a nurse's constant attendance instead of only visits.

So in a case of pneumonia, of enteric fever, of acute rheumatism, pulmonary tuberculosis or any other disease. The very natural result of this sort of nursing would be, and as appears to have been Dr. Worcester's experience in Waltham, to greatly increase the demand for the regular nurse, as now provided.

Second.—The district nurse is to be sent out only under a physician, it appears in all cases, and she cannot fail to prove a very great time and labor saver to the physician, in all cases in practice which she attends, especially in midwifery practice. This, Dr. Worcester states, is his experience. She will let the attending doctor know just when he is needed at the bedside, saving him hours of patient, or impatient, waiting or "watching," calls or visits; she will enable him to leave the case sooner, and to know when other after-calls would be most needed by her morning visit to the patient and reporting the conditions.

Third.—The district or visiting nurse would by her sympathetic presence and other personal characteristics, and her knowledge and acts, bring into the often unventilated, unclean, perhaps darkened, noisy, ill-managed, unhappy home of the sick, pure air and light, cleanliness, quiet, comfort, etc., and so assist immensely to promote recovery and health: abbreviating the period of illness, preventing suffering, despair, death—in a word, to lessen the

mortality by modifying and removing the cause of it, wherever she might be sent.

Trusting the above may enable the readers of your journal to a better understanding and appreciation of the proposed "Victorian Order," I am, etc.,

EDWARD PLAYTER.

Ottawa, November 25th, 1897.

Peritonitis in Typhoid Fever.

Dieulafoy (*Sem. Med.*) discusses the varieties of peritonitis in typhoid fever in relation to operative interference. Peritonitis due to perforation usually supervenes at the period of stasis or during recurrence of typhoid fever, and any part of the intestine involved in the typhoid process may be its seat. It is met with in mild as well as in severe cases, and the diagnosis would be a matter of great difficulty but for a constant and often solitary sign, namely, sudden fall of temperature. In three cases of intestinal perforation the temperature fell below 35° C. It would be a mistake to suppose that all such falls in temperature indicate perforation. In many cases the defervescence is as sudden as in pneumonia, or, again, such falls follow copious hæmorrhages. In the latter case, however, the temperature rises again rapidly, while in perforation it remains low or rises very gradually. Perforative peritonitis lasts from three days to a week, during which time deceptive remissions may occur. The end is almost invariably fatal. In rare cases protective adhesions form, and recovery ensues. In the peritonitis due to the propagation of the infectious process through the ulcerated but not perforated intestine there is a lesion of the vermiform appendix, which may ulcerate and be perforated at the level of its abundant lymphoid tissue. The symptoms are the same as those of other typhoid perforations. "Paratyphoid peritonitis" is due to the remnant of a typhoid lesion of the appendix, and is characterized by a rise of temperature. Surgical treatment of this condition should be the same as in ordinary appendicitis. The problem of when to operate in a perforative peritonitis is a much more serious one, owing to the difficulty of determining that perforation has taken place, the necessity of speedy and opportune intervention, and the fact that there may be several co-incident perforations. Operation, however, holds out some hope of success, and in spite of the ulceration suture may bring about healing.

The Physician's Library.

The Practice of Surgery: A Treatise on Surgery for the use of Practitioners and Students. By HENRY R. WHARTON, M.D., Demonstrator of Surgery in the University of Pennsylvania, Surgeon to the Presbyterian and the Children's Hospitals, etc., etc., and B. FARQUHAR CURTIS, M.D., Professor of Clinical Surgery in the New York Post-Graduate Medical School and the Woman's Medical School of the New York Infirmary, etc., etc. Profusely illustrated. Philadelphia: J. B. Lippincott & Co. London: 6 Henrietta Street, Covent Garden. 1898. To be procured in Canada from Mr. C. Roberts, 393A Cadieux Street, Montreal.

The fault to be found with many of the more recent works on this the most important department of our profession, has been that they have not been sufficiently practical. Few subjects admit of so much latitude in this respect. The authors' aim in this fine work has been that it shall, first of all, be "eminently practical." They have certainly accomplished it, as we have had greater pleasure and satisfaction in perusing this volume than many others which have come under our notice. It is not an easy matter to condense such a subject into one volume, especially in view of the fact that surgery is from year to year going ahead with such rapid bounds; but only by giving proper attention to those departments which require care, and which at the same time will admit of condensation, and leaving out what is superfluous. Such information is given in the book as will enable the practitioner to carry on his work without having to wade through volumes of material which are not to the point. The authors have, as they say themselves, taken into consideration the fact that, in order to give the reader a complete knowledge of the subject without being too lengthy, it is necessary that the information given should include, 1st, A description of the various injuries and surgical diseases sufficiently full to enable the practitioner to recognize them when met with in practical work; 2nd, Full directions for the treatment of such injuries and diseases; 3rd, A sketch of the treatment of the more difficult conditions such as would allow the practitioner to advise patients intelligently in obtaining special skilled surgical attention; and 4th, An outline of the accepted facts and theories of the etiology and pathology of the various surgical affections sufficiently to form a foundation for the clinical picture and give directions for the treatment of the different chapters in the work. The senior author prepared those sections on diseases of the bones and joints, fractures and dislocations, the blood vessels, the chest, the rectum, minor and orthopedic surgery, amputations, etc.; while those on bacteriology, inflammation, the head, the breast, the abdomen, the urinary organs, the male and female genitals, etc., were written by the junior author. The majority of the illustrations are original. From every standpoint the book deserves praise, and we are sure will meet with a phenomenally large sale.

Diseases of the Stomach. Their special pathology, diagnosis, and treatment, with sections on anatomy, physiology, analysis of stomach contents, dietetics, surgery of the stomach, etc. In three parts. By JOHN HEMMETER, M.B., M.D. Philos. D., Clinical Professor of Medicine at the Baltimore Medical College; Consultant to the Maryland General Hospital, etc. With many original illustrations, a number of which are in colors, and a photographic frontispiece. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1897.

Professor Da Costa, in delivering an address before the Medical and Chirurgical State Faculty of Maryland in April, 1896, in speaking of the manner in which medical libraries build up and increase, said that "books attract books, and as a rule any new work in any particular class has a striking family resemblance to those already published." In this work there is much which is not to be found in other works on diseases of this particular organ. The author has gone into methods of diagnosis which are not related elsewhere, so that for that reason, if for no other, Dr. Hemmeter's work is ahead of all predecessors. The subject is treated systematically and concisely, first, the special anatomy and physiology of the digestive organs being given, with methods of diagnosis and general therapy, including dietetics, followed by a methodical discussion of the various diseases affecting the stomach. Too many books are published which are written in such a manner as to make the subject anything but interesting, but in this case the author has paid special attention to the manner in which his subject is presented, rendering those chapters, which might otherwise prove dry reading, full of attraction. The contributors to the work have amongst them those who are recognized authorities in their branches, so that medical men may rest assured that in purchasing this book their money is well invested.

Lectures on "The Action of Medicines," being the course of Lectures on "Pharmacology and Therapeutics," delivered at St. Bartholomew's Hospital during the summer session of 1896, by T. Lauder Brunton, M.D., D.Sc. Ed.; LL.D. Aberdeen; F.R.S., Fellow of the Royal College of Physicians, Associate Fellow of the College of Physicians of Philadelphia, etc., etc. London: Macmillan & Co., Limited; New York: The Macmillan Company, 1897. Canadian Agents: A. P. Watts & Co., 10 College Street, Toronto.

This work gives a magnificent general idea of the mode in which drugs act upon the human organism, it having been originally arranged in accordance with the schedule for the examination in Pharmacology instituted by the Royal College of Physicians and Surgeons of London. The first two or three chapters take up such subjects as the application of heat and cold by both dry and moist methods, bleeding, leeching and cancer irritation. The author thereafter goes most lucidly into such subjects as the caustic action of certain drugs, medicines which have actions upon the penstatic movements of the alimentary canal and secretions of glands connected with it, upon the composition of the blood, on the muscular walls of the heart, medicines which have actions on the processes of inflammation, on absorption, on the secretary action of the kidneys, etc., etc. Each chapter is more interesting than the preceding, and it can be said of this work what cannot be said of very many others, it is so interesting that once taken up by the reader will be seldom laid down until completed.

A Manual of Pathology. By Jos. Coats, M.D., Professor of Pathology in the University of Glasgow; Pathologist to the Western Infirmary and the Royal Hospital for Sick Children, Glasgow. Third edition, revised throughout. 507 illustrations. London and New York: Longmans, Green & Co. 1895.

This edition of Coats' pathology has been thoroughly revised, and to a large extent rewritten. Its having had so extensive a sale is to some extent due to the fact that the author bases it on pathological anatomy,

thus making it so much more interesting to the ordinary practitioner. In this respect Coats' pathology excels many other similar works, as it does not deal entirely with morbid anatomy, pure and simple, making it unendurably dry to all but those who make a specialty of the subject, but on the other hand, being based upon pathological anatomy, makes it most interesting reading to the profession as a whole. The illustrations are particularly good, an item of no little importance in any book, almost all being photographic illustrations of actual specimens. There is no doubt that photographic reproductions of the actual objects are much more instructive to the student than ordinary drawings. The book is published on very fine paper, and altogether is quite an addition to any doctor's library.

Surgery: Its Theory and Practice. By William Johnson Walsham, F.R.C.S. Eng., M.B. and C.M. Aberdeen; Senior Asst. Surgeon, Lecturer on Anatomy and Surgeon in charge of the Orthopedic Department, St. Bartholomew's Hospital, etc., etc. Fifth edition, revised and enlarged. 380 illustrations. Philadelphia: P. Blakiston & Son, 1012 Walnut Street.

We congratulate the publishers of this work in the fact not only that several chapters have been amplified materially, but that the book is in this edition much more handy in size and shape. The character of the type is materially improved, and many new illustrations added. The section on injuries of special tissues is most interesting, especially that portion on ununited fractures, where the illustrations are very clear and distinct. Section V. has been devoted to injuries of regions, with injuries of the head and face, and ending with those of the lower extremities. Section VI. deals with diseases of regions, and devotes over three hundred pages to that department of surgery. The chapter on the different forms of talipes is thoroughly up to date. In every respect Walsham's surgery in the fifth edition is well worthy of a place on the library shelves of every surgeon.

An Act of the Parliament of the United Kingdom of Great Britain and Ireland, passed in the session held in the 59th and 60th years of the reign of Her Majesty Queen Victoria, being the second session of the 26th Parliament of the United Kingdom; Orders in Council; Acts of the Parliament of the Dominion of Canada passed in the session held in the 60th and 61st years of Her Majesty's reign. Ottawa: Printed by Samuel Edward Dawson, law printer (for Canada) to the Queen's Most Excellent Majesty. Anno Domini, 1896.

As the title-page indicates, this book consists of the different Acts passed by Parliament during the 59th and 60th years of Her Majesty's reign, and those of the Dominion of Canada in the 60th and 61st years of Her Majesty's reign. The work is most useful, and especially so to those of the profession who take any particular interest in medico-legal work. Every physician holding a commission as coroner should be in possession of a copy, as it contains much of interest to them. The work can be procured from the Carswell Co., Limited., of Toronto.

The Physician's Visiting List (Lindsay & Blakistons) for 1898. Forty-seventh year of its publication. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street.

For now well-nigh fifty years this exceedingly compact visiting list has been published. It has every year grown in popularity till we are prepared to say no other in print has as large a sale all over this continent. It is gotten up

to accommodate from twenty-five to one hundred patients weekly, but in addition to the regular edition the publishers get out a perpetual one, which only differs in having no dates and the addition of special memorandum pages. There is also a monthly edition so arranged that the patient's name has only to be written once in the thirty days. We predict a very large demand for this 1898 visiting list.

A Practical Treatise on the Office and Duties of Coroners in Ontario and the other Provinces, and the Territories of Canada, and in the Colony of Newfoundland, with schedules of fees and an appendix of forms. Third edition. By Wm. Fuller A. Boys, LL.B., Junior County Court Judge, County of Simcoe, Ontario. Toronto: The Carswell Co., Limited, Law Publishers, etc. 1893.

To coroners in Canada the work known popularly as "Boys on Coroners" must almost of necessity form their vade mecum. It is a work which is eminently useful in every respect, giving fullest particulars as to the various laws existing not only in Ontario but the other provinces. The former editions were intended for use in the Province of Ontario, this edition being, however, adapted to all the Provinces, Territories of the Dominion of Canada, and to the Colony of Newfoundland.

Selected Article.

NEUROTIC DYSMENORRHŒA.

BY D. S. MADDOX, M.D.

Dysmenorrhœa is one of the most frequent complaints the general practitioner is called upon to treat. That it is one most obscure in etiology, as well as one of the most difficult to permanently relieve, all physicians will admit.

Most authorities divide dysmenorrhœa into the neuralgic, the obstructive, the congestive or inflammatory, and the membranous forms. The frequency of these varieties is in the order named. In other words, the most frequently met is the neuralgic form, and the least frequent is the membranous.

While one who has had experience can readily determine the character of the case by the character of the symptoms, and although we do occasionally find these typical varieties, it is doubtful if any case continues one of any of these (distinct) varieties for a long period of time. Thus, a neuralgic dysmenorrhœa does not long remain purely such. It is impossible to suffer great pain during the function of menstruation continuously month after month, and year after year, without structural changes in the endometrium resulting. Neurotic dysmenorrhœa in time becomes congestive, and, finally, inflammatory dysmenorrhœa.

In a certain sense, every dysmenorrhœa is mechanical. Neuralgic dysmenorrhœa is certainly mechanical when spasmodic: for

instance, when there is spasmodic action of the fibres of the cervix, analogous to the spasmodic action of the sphincter ani in fissure of the rectum. There is a mechanical obstruction in dysmenorrhœa when the cause was originally a flexion or displacement. Sooner or later the neurotic element enters into all cases of dysmenorrhœa. Of course, obstruction is one of the chief underlying factors in causing pain in some cases of dysmenorrhœa. It is a well-known fact that savage women suffer much less during labor than their civilized sisters, possibly because a higher development of the nervous system is incident to civilization. It seems natural to suppose that this high development of the nervous system makes menstruation more painful; or, in other words, that the pain, at least in part, is nervous or neuralgic. Dysmenorrhœa in young women is often caused by improper mode of life, and for the relief of such it is not the gynecologist, but the general practitioner, who should be consulted. The latter by proper advice and judicious medication can and will usually give them relief without the examination, which, in unmarried women, when unnecessary, is little less than a crime.

Some recent authorities deny the existence of a pure neuralgic dysmenorrhœa, attributing all cases of dysmenorrhœa to infection and arrested development. I think, however, that most practitioners believe there is such a thing as neuralgic dysmenorrhœa. I regard it as the most frequent form of dysmenorrhœa, coming on at the very beginning of menstruation, and, it may be, lasting until the end of menstrual life: and it is the most troublesome form to treat in many instances. One reason for believing in its existence is the conduct of cases, and the manifestation of symptoms. Some of these cases begin at the very inception of menstruation; some not until months afterward: some not until after married life, and some not until after parturition.

Some, when they have begun, or later on, stop for one or several months or a few years, and then for some cause return again. There is great irregularity regarding time, duration and the position of the pain in these cases. Not a few of these cases suffer irregularity in quantity at different times, and not a few cases suffer irregularity in position at different times.

In the treatment of dysmenorrhœal cases, where there is no tangible pelvic lesion demanding strictly local attention, or operative interference, I have of late come to rely upon a single remedy, apioline, the active principle of *petroselinum sativum*, introduced to the profession by Chapoteaut. The following cases are of the neurotic variety of dysmenorrhœa, and clearly demonstrate the value of the drug as a therapeutic agent.

Case I.—Miss F., aged 20, anemic and poorly nourished. For two years she had suffered greatly from painful and scanty menstruation. At times the pain was so severe that the hypodermatic use of morphia was resorted to. An iron tonic was prescribed; also, apioline at the menstrual periods, beginning three days before

the flow was due. In three months the patient was much improved in general health, and her menstruation was normal.

Case II.—Mrs. R., aged 34, married ten years, three children, youngest two and a half years old. Had had painful and scanty menstruation off and on nearly four years. When I first saw her she had had four painful periods in succession. Apioline was ordered (one capsule three times a day) during the flow, beginning as usual two or three days in advance. The effect was immediate, pain being slight, and the flow more copious. The second month there was no pain, and flow was normal in quantity.

Case III.—Mrs. B, aged 27, married five years, one child two years old. Previous to marriage had suffered from painful menstruation, but after marriage the attacks had subsided, and only recurred after the birth of her child. The pain experienced was of a severe character, necessitating confinement to bed and opiates. She was put on apioline (one capsule three times a day), beginning three days before the period. This remedy was continued for three months, after which menstruation was normal.—*Med. and Surg. Reporter.*

THERAPEUTIC NOTE.

Dr. Gottschalk, of Frankfort, reports (*Brit. Med. Jour.*, No. 1828, p. 7) the results from the use of Stypticin in forty-seven cases of hæmorrhage. It may be given hypodermically (in urgent cases), or per os in solution or gelatin pearls. Dr. Gottschalk finds that 0.05 Gm. ($\frac{3}{4}$ grn.) may be taken five or six times a day without any untoward effects. It has a great advantage over hydrastinine and other uterine hemostatics, in that, as might have been expected from its source, it possesses a well-marked and potent sedative action that is both local and general, and hence specially indicates its use in dysmenorrheic affections. Stypticin promptly checks hæmorrhage resulting from pure uterine subinvolution—that is, that due to muscular atony and not to retention of membranes, etc. In fungous endometritis it is a valuable adjuvant to the currette; and it is very useful when the patient objects to curretting, and particularly in those casss in which this treatment dees not stop the hæmorrhage. It is also useful in bleeding caused by fibroids or the climacteric. In purely congestive menorrhagia it is well combined with hydrastinine. In menorrhagia the drug is best given four or five days before the period, 0.025 to 0.05 Gm. ($\frac{3}{8}$ to $\frac{3}{4}$ grn.) four or five times a day, and continued until bleeding ceases: this not only diminishes the hæmorrhage, but also renders the use of much smaller doses sufficient.

In violent hæmorrhage Stypticin should be given hypodermically, according to the following formula:

Stypticin ..... 1 Gm. (15 grn.)
Distilled water ..... 10 Gm. (150 min.)
Inject daily 2 Cc. (30 min) into the gluteal region.

Stypticin is powerless to control the bleeding of uterine polypi, and is contra-indicated in threatened abortion, or, indeed, in any of the hæmorrhages of pregnancy, as it has a marked power of stimulating uterine contractions. This may be induced by it directly, or it may result indirectly from the anæmia produced by its vaso-constrictor action.

In all of Dr. Gottschalk's experiments no other treatment than that of Stypticin was adopted.

Stypticin (chemically, Cotarnine Hydrochlorate) is obtained from the opium alkaloid narcotine by the action of oxidizers. Its formula is $C_{12}H_{13}NO_3.H_2O.HCl$, and it occurs as yellow crystals or powder, readily soluble in water and in diluted alcohol.

[PUBLISHERS' DEPARTMENT.]

A COMPARATIVELY new preparation recently placed upon the market, and which so far has made quite a name for itself in the treatment of certain conditions, is Abbey's Effervescent Salt. Of effervescent salts (so-called) already introduced, there are a large number which are, to say the least of it, not what they are represented to be, and which do not produce the therapeutical effect claimed for them. In that way medical men have been deceived in the past, and to some extent lost faith in such preparations owing to frequent disappointment. Some manufacturers in the past have erroneously conceived the idea that, so long as the powder they are foisting upon the market is made to effervesce on being dissolved in water, they have accomplished all that is required from a medicinal standpoint. Such is nonsense, as the efficacy of such a powder lies not in its effervescent qualities at all, but in the careful compounding of its ingredients, which must be absolutely pure. In that way only can the manufacturers expect to regain the confidence of the medical profession and induce them to prescribe their goods. Abbey's Effervescent Salt certainly seems to meet all those conditions, and judging from the reports as to results received from the most prominent physicians, as well as institutions of this country, we should think that it would repay medical men to give the preparation a thorough trial. In those cases where a gentle, rapid and watery action of the bowels is required, or where there is congested condition of the liver, a dose of Abbey's Salt in the morning before breakfast will have a most desirable effect. In those cases also where there is dropsical condition present, and where the attendant physician wishes to rapidly relieve the system of a large amount of water without inducing great disturbance, this preparation can be depended upon.

DOCTOR,—You want facts about hypnotism. You want to test suggestive therapeutics. You want the *Hypnotic Magazine*. 10 cents per copy. $1.00 a year, including premium book on Suggestive Therapeutics. Psychic Publishing Co., 56 5th Avenue, Chicago.

The Canadian Journal of Medicine and Surgery

A JOURNAL PUBLISHED MONTHLY IN THE INTEREST OF MEDICINE AND SURGERY

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Original Contributions.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

RECURRENT FUGITIVE SWELLINGS OF THE EYELIDS.

BY JAMES M. MacCALLUM, B.A., M.D.,

Oculist and Aurist to Victoria Hospital for Sick Children; Assistant Physician to Toronto General Hospital; Professor of Therapeutics in the University of Toronto.

EVERY one is familiar with the history of the patient who, on waking in the morning, finds great swelling of his eyelids—a swelling so quickly gone, leaving so little trace, that its existence is to the physician the subject of mild scepticism, or of indifference, if it disappears in a day or so without any treatment.

When, however, this œdema disappears, but to reappear after a few days, or it may be a few hours, it becomes both puzzling and interesting.

The clinical picture is that of a swelling without any pitting, not sharply circumscribed, but gradually fading away into the surrounding skin, without change in color, unless the vaso-motor disturbance has been unusually great, when it may have a whitish centre upon a base of deeper color, or may even be purplish, as in one of the cases narrated.

As a rule, there are no symptoms premonitory of its onset, but in some cases it is preceded by smarting, burning, and even pain; or the face may be reddish until the swelling appears. There is no rise of temperature prior to, or associated with, the attack.

A. A., female, aged seven years, took part in a church festival:

woke up next morning with great puffiness of the lids of the left eye, which disappeared in twenty-four hours. Two weeks later she had an attack of swelling of the same character, but upon the nose—no injury—of neurotic temperament.

Miss R., aged twenty-four years, school teacher. Puffiness, but no pitting, of both lids of left eye, with some slight discoloration of lower lid; conjunctiva slightly hyperæmic; swelling preceded the night before by some burning and smarting in the eyes. Has had repeated attacks at varying intervals—usually not longer than two weeks—now in the right eye, now the left, swelling never lasting for more than two days, usually being gone by night time. Inquiry revealed constipation and dyspeptic symptoms. Vision, $\frac{5}{5}$ No. Hm.

E. H., male, aged sixty years. Swelling of eyelids and face. Says that the face feels hot and burning. On Friday afternoon his face was flushed. On Saturday night the swelling appeared. By Monday it had almost disappeared. No pain, no tenderness, no vomiting. Has had heartburn for some weeks. Had asthma about six weeks ago: never any hives. Has had three other such attacks. No erythema. Many years ago had a similar attack, which lasted for some twelve days. Has had "salt rheum."

E. T., aged twenty-five years—domestic. Woke up during night and found her right eye "stiff" By morning the swelling had completely closed the eye. Upper lid whitish, in portion corresponding to tarsal cartilage: rest of the lids reddish brown. No pitting; slight hyperæmia of the conjunctiva: slight photophobia and lacrymation. Has frequent attacks of hives, lasting a week or more: last attack four days ago. Has now a "mosquito bite," which has left the right hand greatly swollen. Flatulence, heartburn, constipation. Tactile sensation is less acute on right side than left. Bone conduction in right mastoid diminished. The swelling in the lids remained a day or two, migrated to the back of her hand, disappeared, and has not recurred.

Mrs. D. aged fifty-nine years. Twelve months ago noticed that right side of face and right hand were swollen. Had pain running up the arm and down the right side of chest and abdomen into the leg. Right side of tongue was large and felt heavy. As the swelling in the face began to diminish, pain was felt there, and then the leg swelled. During the attacks the swelling of the lids is so great as to prevent her opening the right eye. Swollen parts are first purplish; but as swelling subsides, are yellow, green, and finally all color fades away. During one attack she had a ring of rash, about two inches wide, around her waist, which has left some whitish scars. (Herpes Zoster?) Pain continues in head and face a long time after the swelling has disappeared. Has now had four such attacks within a year.

She now feels that another attack is coming on, for she has headache and a sense of numbness in the right side of the face. Examination shows diminished tactile sensation over the whole

right half of face, right hand, arm and leg. The sense of taste is affected, for quinine and sugar are not tasted when placed on right half of tongue, but quickly are on the left, although on that side taste is perverted, for sugar is said to be salt. Inhalation of Spts. Ammon. Aromat produces no sensation in the right nostril, but does in the left. Sight and hearing not tested. Two weeks later, taste and smell were normal. Four weeks later, and just after another attack, sensation was diminished on right side, from the face down to the foot, while right patellar tendon reflex was increased, a slight tap causing extension not only of the leg, but also of the foot.

That this fugitive and recurrent œdema is not due to inflammation in the structures of the lid, conjunctiva, eyeball or orbit, is at once manifest upon examination. Those few ophthalmologists, who mention its occurrence, have evidently been puzzled and do not advance any positive opinion as to its causation. Fuchs says that many of the puzzling cases of recurrent œdema of the lids are probably erysipelas of but slight intensity and extent: that others give warning of cardiac or renal disease, being forerunners of the œdema of the lids seen in these conditions—a hypothesis scarcely tenable. De Schweinitz says that fugitive and recurrent œdema "has been observed with migraine, at the time of establishment of menstruation, and spontaneously without apparent cause. Some instances are analogous to urticaria."

Fick seems to have been in doubt as to the nature of œdema of this sort, for he says: "Non-inflammatory œdema is also, as a rule, a sign of disease, though the disease may not always be so easy to find. *In some cases the œdema must be called the disease itself.* If a patient is seen with œdema of the lids, for which no local cause can be found, search must be made for some disease of the heart, kidneys or liver."

In two of the cases narrated the œdema was associated with disturbance of the nervous system, an association which, if sought for, might be more frequently observed.

That the nervous system plays a causal part in the production of such œdemas is shown by the well-known association, in tabes, of lightning pains with cutaneous ecchymosis, and less frequently with swellings which disappear in a few days—the œdemas and ecchymosis occurring in those parts of the body subjected to pain.

Other, and perhaps more familiar recurrent œdemas, due to nervous influences, are those about the hands, feet, or joints, in hysteria, and those of neuralgia and migraine. Gowers records a case of cranial neuralgia in which each attack was accompanied by great œdema of the scalp, which slowly disappeared some hours after the cessation of the pain, and Ormerod records paroxysmal headache, followed by œdema and ecchymosis of the eyelids. The case of Mrs D. closely resembles one of neuralgia recorded by Gowers, in which attacks of pain in the tongue and face were attended by swelling of each part, which usually came on during the night, and sometimes occurred with very little pain.

Similar œdemas may occur in other nervous affections, cerebral apoplexy, syringo-myelia, nervous dyspepsia, hystero-epilepsy, neurasthenia, tumors of the spinal cord. These swellings are not true œdemas for they do not pit on pressure; the increased amount of fluid must be present not in the lymph interstices, but in dilated vessels. In the localized area the tonic influence of the vaso-constrictor nerves is suddenly removed and the vaso-dilators are then unopposed. This is seen in the redness which sometimes precedes the swelling, in the feeling of heat and burning. And yet, it is not always merely a paralysis of the vaso-constrictors, for there may be a whitish centre surrounded by a diffuse reddish areola.

Unusual dilatation or constriction is not the sole disturbance in the vessels. The vessel walls may allow exudation of blood, which passes through all the changes of color characteristic of extravasation. Whatever the remote cause, a blood state, a toxine, improper food, emotion, or disease of the nervous system, the direct mechanism of the phenomena is disturbance in some part of the complex vaso-motor system, the bulbar or the spinal centers, or in the sympathetic ganglia.

As Gowers says: "Vaso-motor disturbance means the deranged action of the vaso-motor centre for that territory, and it is as difficult to explain the disturbed action of the vaso-motor cells as of the sensory cells."

It is quite possible that these attacks may occur in patients with some error of refraction, but that error is not to be regarded as a causal factor, for its correction by proper glasses has no influence in preventing recurrence of the swelling. As long as there exists, anywhere, anything which may cause reflex irritation of the vaso-motor system, so long will the swellings recur.

These swellings have been described under the name of angeioneurotic œdema, but the term has generally been applied only to the more marked conditions, where the swellings have involved many and other parts of the body, and have been accompanied by severe gastro-intestinal symptoms. The minor attacks occurring only about the eyes are really of the same nature, and may or may not be associated with gastric or intestinal symptoms.

It is beyond the scope of this paper to enter into a consideration of the relationship which manifestly exists between many affections, commonly regarded as distinct, yet but links in the chain of vaso-motor disturbances—urticaria, angeioneurotic œdema, hay-fever, asthma, erythema, purpura, Raynaud's disease, exophthalmic goître.

13 Bloor Street West, Toronto.

Dr. G. Archie Stockwell, F.Z.S., for ten years the confidential medical adviser of Parke, Davis & Co., Detroit, has severed his connection with that firm and is now engaged in the same capacity with Henry K. Wampole & Co., of Philadelphia. We congratulate Mr. Wampole on securing so bright a mind as that of Dr. Stockwell, as what is Detroit's loss is Philadelphia's gain. W. A. Y.

A CLINICAL CASE OF INTEREST.

BY R. J. MATTHEWS, M.D., TORONTO.

Katie ——: age, eighteen years. Occupation, housemaid. Birthplace, Ontario.

Family History.—Father living and healthy: mother living, has some form of heart trouble. All grandparents lived to old age, and were very healthy. Patient has five brothers and two sisters all healthy.

Previous History.—Of the diseases of childhood has only had measles and whooping-cough, has never been strong but has no history of any definite disease. As a child she was so weak and miserable that she was unable to attend school. She kept much the same till she was seventeen, when menstruation occurred. Her menses came on once or twice, and then ceased. During this period she was very anæmic in appearance, had a variable appetite, was constipated, troubled frequently with headaches, and her breath was so short that she could not go upstairs without resting.

Present Condition.—General appearance waxy, with a clear, transparent skin, with a certain amount of the greenish color so characteristic of chlorosis, lips and conjunctiva of lower eyelids pale, tongue typical of the disease, nails anæmic, malar bones unusually prominent, weight constantly decreasing. Complains of pain between shoulders and cannot sleep at all at night. On examination of the heart there is intermittency, though the presence of no organic murmur. Pulse soft and flabby: sclerotics have a bluish-white appearance: tissues generally flabby and wanting in tone. There is a certain amount of œdema about the ankles and lower eyelids, with a tendency to swelling of the limbs after standing any length of time. Patient complains of coldness of extremities, and even a tendency to syncope after exertion, with spots before the eyes, noises in the ears, and neuralgic pains over the body. She is inclined to be low spirited and irritable. There is a blowing murmur in the arteries, particularly the sub-clavian, with a venous hum over the jugular vein.

Diagnosis.—Chlorosis.

Treatment.—After administering the usual treatment for anæmia with little or no result, alternating first one form of iron with another, and giving the usual increased amount of fresh air and good nourishment, I prescribed Pepto-mangan (gude) in tablespoonful doses.

She has now taken about three bottles and is very much improved. She can now do her work without tiring, has a much better color, her headaches are also better and menstruation has returned regularly.

REPORT OF AN OPERATION FOR RELIEF OF COMPLETE PROCIDENTIA OF THE UTERUS AND BLADDER.*

BY H. O. WALKER, M.D., DETROIT, MICH.

Mrs. I. St. C., aged thirty-two years, weight ninety pounds, was admitted to St. Mary's Hospital, Detroit, January 3rd. 1897, with the following history: Her father and one sister died of consumption: the remainder of the family are healthy. At the

FIGURE 1.

COMPLETE PROCIDENTIA OF UTERUS AND BLADDER. BEFORE OPERATION.

age of fifteen she was married, and a year later gave birth to a child, which died at the age of six months. Shortly after the death of the child she contracted syphilis, again became pregnant, and aborted at the end of the fifth month. In her eighteenth year she joined a circus, and did a great amount of horseback riding and trapeze performing, which line of work she followed for two seasons, then being compelled to discontinue it on account of severe pelvic pains. There was marked dysmenorrhœa and painful

* Abstract from a paper on "Abdominal Surgery with Specimens," read at a meeting of the Michigan State Medical Society, held at Grand Rapids, May 13, 1897.

defecation, together with occasional attacks of diarrhœa. For the past fourteen years, she has followed the avocation of waitress and seamstress. She had acquired the opium habit, taking as much as half an ounce of the tincture during twelve hours for the relief of rectal tenesmus.

Physical examination revealed a complete prolapsus of the uterus and bladder, and an exaggerated rectocele. The labia majora were greatly enlarged and of a dense fibrous feel, the condition probably being that known as syphilitic elephantiasis. The

FIGURE 2.

COMPLETE PROCIDENTIA OF UTERUS AND BLADDER. AFTER OPERATION.

labia minora were also considerably hypertrophied. There was an eversion of the rectum, and a fistula upon the right side, extending into the rectum, about two and one-half inches from the anus. At this point, there was present also a rectal stricture, which scarcely admitted an ordinary-sized lead pencil. The surrounding parts were greatly excoriated by the discharges from the rectum and fistula, Figure No. 1 gives a fair representation of the condition.

On January 13th I operated in the following manner: First, I performed vaginal hysterectomy, which necessitated the greatest care to avoid wounding the bladder or rectum. No clamps were used, the arteries being tied with catgut as they presented. I then dissected up the thickened mucous membrane and removed it by

elliptical incisions, commencing at the meatus above and keeping close to the labium on each side, down to the upper border of the everted rectum. The cut edges were approximated with interrupted silkworm-gut sutures, leaving an opening, two-thirds of the way down, for such drainage of the peritoneal cavity as might be necessary. Forcible dilatation, with proctotomy of the rectal stricture was then done, and all the parts, except the peritoneal cavity, were liberally irrigated with 1-1000 bichloride solution, then thoroughly dried with sterilized gauze, the rectum packed, and the usual dressing applied and held in position by a large-sized T bandage.

Owing to the frequent evacuation of the bowels and the necessity for catheterization, the frequent removal of the dressings and their reapplication were required. The drainage tube was removed on the third day. The future history of the case was uneventful, the temperature never going above 100° F. at any time. At this writing the patient is able to walk about and do light work, the only trouble being some rectal incontinence. Liberal administration of the iodides was resorted to at intervals during the progress of the after-treatment.

Two methods of surgical treatment presented themselves as being applicable to the relief of this poor woman's condition, namely, the one adopted, and the other an abdominal section and the fastening of the uterus to the abdominal wall. I questioned the feasibility of the latter method, owing to the numerous adhesions existing and the extensive hypertrophy of the parts. The method resorted to has certainly justified the effort. Figure No. 2, from a photograph taken about a month ago, represents her present condition.

Dr. Bruce Riordan has just returned from Chicago, where he attended a meeting of the Executive Board of the International Association of Railway Surgeons, which meets in Toronto, July 6th to 8th. The 1898 meeting is going to be by far the most successful that has taken place for many years, the promised attendance being very large. Arrangements have been made whereby a daily issue of the official organ of the Association, the *Railway Surgeon*, will be published. The local Committee of Arrangements will meet in a few days now, when full details, as to the comfort of the visitors, will be attended to.

Dr. R. A. Pyne will, we understand, receive no opposition for the representation of East Toronto in the local Legislature.

Surgery.

PROPOSED NEW NOMENCLATURE FOR OPERATIONS ON THE ALIMENTARY CANAL.

A. Ernest Mayland, M.B., Glasgow, surgeon to the Victoria Infirmary, in a masterly paper in *The Annals of Surgery*, Vol. xxvi. No. 3, Sept., 1897, points out the inconsistency of our present nomenclature for operations on the alimentary canal, and proposes the following in its stead:

1. Affix-tomy (τέμνω, "to cut").

For operations which consist in opening some part of the alimentary tract for exploratory and other purposes, and its closure at the same operation.

Operations.

Œsophagotomy.
Gastrotomy.
Duodenotomy.
Enterotomy { Jejunotomy. / Ileotomy.
Cæcotomy.
Colotomy.
Sigmoidotomy.
Proctotomy.

2. Affix stomy (στομα, "mouth").

(*a*) Operations which consist in stitching some portion of the alimentary tract to the parietes and establishing a temporary or permanent opening.

Operations.

Œsophagostomy.
Gastrostomy.
Duodenostomy.
Enterostomy { Jejunostomy. / Ileostomy.
Colostomy.
Sigmoidostomy.

(*b*) Operations which consist in establishing permanent openings between one segment of the canal and another. (In these compound words the proximal segment "where two different regions are united" should be named first).

Operations.

Gastro-enterostomy { Gastro-duodenostomy. / Gastro-jejunostomy. / Gastro-ileostomy. / Gastro-colostomy,
Entero-enterostomy (Entero-anastomosis) { Jejuno-jejunostomy. / Jejuno-ileostomy. / Ileo-ileostomy.
Ileo-(or colo-)proctostomy.

3. Affix ectomy (ἐκτέμνω, "to cut out").

Operations which consist in the removal of some part of the alimentary canal.

Operations.

Œsophagectomy.	Enterectomy	Jejunectomy.
Gastrectomy.		Ileoectomy.
Pylorectomy.	Cacectomy.	
Duodenectomy.	Colectomy.	
	Sigmoidectomy.	
	Protectomy.	

4. After excision of any part of the canal its continuity may be established by (*a*) end to end junction: (*b*) lateral approximation (the ends are closed and openings made in the sides of the opposing coils: (*c*) lateral implantation (one end is closed while the other is fixed into a lateral opening of the occluded portion).

5. The methods by which the parts are secured together after incision or excision of any part of the tract are known mostly by the name of the materials used or the authors devising them:

Union by Czerny-Lembert, Halsted, Able, Mannsell, etc., suture:

Union by Murphy's button:

Union by Senn's decalcified bone plates:

Union by Robson bone bobbins, etc.

6. The affix rhaphy (ῥαφή, "suture").

Operations which consist in lessening abnormally enlarged or dilated sections of the tract by suturing together folds of the visceral parietes.

Operations.

Gastrorrhaphy.	Colorrhaphy.	Proctorrhaphy.

7. Affix plasty (πλάσσω, "to form").

Operations performed for stricture of some part of the canal, the stricture being divided in the long axis, while the parietal edges are united in the transverse axis, thus forming a wider channel.

Operations.

Pyloroplasty.	Enteroplasty.

8. Affix pexy (πήγνῦμι πήξω, "to fix").

Operations which consist in fixing by suture to the parietes some abnormally dilated or movable segment of the canal.

Operations.

Gastropexy.	Colopexy.	Proctopexy.

9. Artificial anus.

Operations for diverting the whole contents of the intestine through an artificial opening; performed by bringing a loop of bowel outside the parietes or breaking the continuity of the canal

by section and fixing the proximal extremity to the parietal incision.

Operations.

Enteric anus—Ascending colonic, or { Right inguinal anus. / Right lumbar anus.

Sigmoid anus—Descending colonic, or { Left inguinal anus. / Left lumbar anus.

Sacral anus—Transverse colonic anus. B. L. R.

SOME TYPICAL FORMS OF CURVATURE OF THE SPINE.

Mr. Noble Smith, in a recent lecture, said that instances of severe ordinary lateral curvature are so extremely frequent that skeletons showing very severe deformity are quite a common feature of our pathological collections. I would ask, Is it possible that the spine can give way either posteriorly or laterally, irrespective of caries, to the extent of the many severe cases of deformity which exist without there being some undue softness of the bones or unnatural laxity of the ligaments? It is the exact pathology of those cases that require study.

It is of importance to deal cautiously with so-called "spinal weakness." Many a case of incipient spinal caries has been stimulated into severe activity by the "exercise treatment," whereas the plan I adopted in the following cases would have been more suitable whether the case had been caries or debility alone. It is well known that the spine may give way laterally or posteriorly from weakness. Such weakness is often attributed to want of power in the muscles alone, but this view of the cause of the trouble does not coincide with certain facts which I have observed.

During the last eighteen years I have measured the backs of many hundreds of patients, and have found that when the body has been well developed for the age and the individual has been robust the length of the back from the level of the shoulders to the level of the chair in sitting has been equal to a measurement taken from the spine between the scapulæ round one shoulder back to the spine again. In a very large majority of the patients suffering from weak and crooked spines, the length of the back has been in excess of the shoulder measurement. The shoulders (which will generally be sloping downwards and forwards) should be brought back to a normal position at the time of measurement. The excessive length of back in proportion to the robustness of the body supports the view that weakness of the back is not so much due to muscular debility as it is to weakness of the spinal column itself—*i.e.*, weakness of the ligaments accompanied not infrequently by undue softness of the bones. Debility from illness, from insufficient nourishing food, and rapid growth have seemed to be the most frequent causes of such want of stability in the spine. This view is sup-

ported by a number of facts, the most noticeable of which are recorded in the following history of a typical case:

A patient (say a girl about thirteen years of age) possesses a spine measuring one and a half inches in excess of the shoulder circumference (as above described): there is inability to sit up straight without assistance (that is the patient stoops perpetually), there is a complaint of almost constant or very frequent aching in the back, and when sitting there is to be seen a distinct lateral curve in one particular direction. By means of treatment, directed to preventing the spine from falling into bad positions without interfering with muscular action and improvement of the general health, the back gradually becomes straight and strong. The length of time during which the treatment will have to be carried out depends chiefly upon growth. Perhaps a year or eighteen months may elapse before the child will have "outgrown" her want of physical robustness. This result, however, will be attained sooner or later, and when it has happened treatment may be thrown aside absolutely. Measurement will then often show an adjustment of the dimensions, so that the shoulder measurement will be the same as the measurement of the spine.

There are, however, some individuals who grow up without efficient treatment having been adopted for this condition, and although they may have been able to follow their vocations in life fairly well, yet they are liable to suffer greatly from their weakness. They may develop scoliosis and become very deformed or kyphosis, and if the latter deformity is produced the symptoms may closely simulate those of caries, in fact it may be very difficult to decide whether any inflammatory disease be present or not, and those who have had most experience will probably have the greater difficulty in forming an immediate diagnosis. Fortunately it matters comparatively little at first what the exact nature of the weakness may be, for the treatment should be the same for a certain length of time in both cases, and during that time we shall have an opportunity of studying the affection sufficiently to arrive at a more definite diagnosis. Certain it is that we had better err upon the side of excessive caution than assume too readily the absence of inflammatory disease.

I am not referring to cases in which hysteria plays a prominent part, although it must not be forgotten that even hysterical patients may have real disease or real weakness, and when such a combination exists efficient treatment of the spine helps materially in overcoming the hysterical element.

The relief from pain in these cases greatly depends upon one's ability to support the ribs from contact with the crest of the ilium. The spine in the last recorded case was greatly rotated in the lower lumbar region, and I was only just beginning to succeed in relieving this contact at the date of that last visit. I give this case as one of the most difficult I have had to deal with, and it shows that even under such adverse circumstances a deformity can be stopped from increasing and relief given to the patient's suffering.

With regard to the plastic felt jackets which are so commonly used in the present day when a suppрt is required, I would remark that they are not satisfactory in their mode of action; they press on the chest but do little towards holding back the shoulders; they interfere with the use of the muscles, they interfere with the evaporation of perspiration, and they fail to give efficient support. The following figures show the ineffectiveness of the ordinary felt jacket in controlling the position of the spine and the immediate effect of applying the adaptable metal splint.

The metal splint has the following advantages: 1. It leaves room for action of the muscles. 2. It develops the chest and does not press upon it. 3. It prevents the spine from subsiding into bad positions. 4. It forms a fixed basis from which to supply pressure upon the lateral curves. 5. It enables the surgeon to see the effect upon the spine while the apparatus is *in situ*. 6. It is made of steel, the lightest material for the purpose, which is so tempered that it can be bent into any form by the surgeon himself. 7. It is comparatively light and is so helpful to the patient that a weak child can do more with it on than without it. It may be accepted as an axiom that whatever position the spine is held in by means of the adaptable metal splint that position will in time become permanent. F. N. G. S.

A NEW DRESSING FOR GRANULATING WOUNDS.

A. Ernest Gallant, M.D., New York, in a paper in *The Annals of Surgery*, Vol. xxvi., No. 3, Sept., 1897, makes reference to a paper read before the Section on Surgery of the New York Academy of Medicine, by Prof. William Waldo Van Arsdale, June 12th, 1893, and reported in the *New York Medical Journal*, Vol. lviii., page 115, 1893, on a new dressing for granulating surfaces, composed of

℞ Bal Peru..... ℥ p.
Ol Ricini ..... ℥ j.

This has been tried on 69,364 cases with good success.

Dr. Gallant, in his paper, says: "This is mildly antiseptic: it will keep for any length of time: the oil remains sweet: any powder may be used on the wound: the odor of iodoform is modified. Bal Peru is irritating to the skin if used in solutions over 10 per cent. in strength."

Method of applying it is to moisten the gauze with it thoroughly and apply over the wound, this causes the gauze to act as a sponge and absorb all secretions from the part up to the point of saturation. This action is continuous. Do not pack cavities firmly, as this action is interfered with and contraction is retarded. Cover with gutta-percha, oil silk, oil muslin, paraffin paper, etc., and bandage.

The advantages claimed for this dressing are:

1. Continuous drainage.

2. Retention cannot occur, and there is no scabbing, no pain, no redness and no swelling, and if these are present they quickly subside.

3. Bacterial growths are reduced to a minimum, therefore the production of ptomaines practically ceases, and as no pressure is applied no lymphangitis or systemic absorption occurs, and there is no fever.

4. Epithelial growth goes on more rapidly than under any other dressing.

5. No eczema occurs around the margins of ulcers, and there is entire absence of the irritation met with when antiseptic dressings are used.

6. Removal is painless, bleeding does not occur as it does not adhere to the granulations.

7. The granulations are never profuse, and quickly shrink after the dressing is properly applied.

8. Infrequent dressings—twice a week being usually sufficient.

9. Irrigation, disinfection or scraping of abscess cavities may be avoided.

The dressing simply drains the wounds and keeps them clean, it does not actively prevent suppuration.

The occasional growth of the bacillus pyocyaneus in the dressing is not prevented. This bacillus is certainly harmless to wounds, and does not delay healing.

The varieties of the bacillus fœtidus are more important and could be prevented by the use of bichloride gauze 1 in 500.

The green and violet pyoktannin gauze, with the balsam mixture, did not always prove satisfactory.

We have used this dressing and can recommend it. Besides possessing the before-mentioned advantages, it is economical both of material and the surgeon's time. B. L. R.

Surgical Pathology.

ON THE PATHOLOGIC ANATOMY OF TRAUMATIC HERNIA.

BY THOMAS H. MANLEY, M.D.,
Professor of Surgery, New York School of Clinical Medicine.

Mr. Bland Sutton has called attention to the lamentable state of the abdominal walls which may succeed laparotomies, and alleges that sometimes the hernial protrusion following may occasion the afflicted much more distress than the state for which the original operation was performed. And recently (London *Lancet*, Nov. 22, 1897) Mr. Alban Doran contributed a valuable report on the same topic.

It is, therefore, evident that whenever we proceed to open

widely the cavity of the peritoneum, we should not overlook the possibility of ventral extension at any time, recent or remote, after recovery.

But why should this troublesome sequela follow at all, if proper provisions are observed to prevent it?

In order to answer this, we must briefly review the anatomy of the parts involved, and the pathologic processes which come into play.

First, it should be remembered that the fixed and floating viscera of the abdomen are held in position by contractile tissues. Secondly, that these are largely supported in position by the abdominal walls, which laterally and anteriorly are so clothed by a muscular investment as to preserve a firm uniform support. Thirdly, both of these supports are powerfully influenced by incessant, by intermittent pneumatic pressure from above, and a varying pressure through gaseous distension of the intestine.

An incision or a laceration through any area of the muscular walls of the abdomen leaves a dead line, a defective gap. Muscular tissue once destroyed is never reproduced, the hiatus is filled with connective tissue. Experience has proven, that the less there is of this tissue the more certain and secure is the bond of union, and hence we have come to discard drainage in all non-suppurative states and endeavor in all cases to secure primary union.

In the young, vigorous, male adult of firm muscle-fibre, the contractile properties of the mesentery are quite ample to hold the intestines up, without the auxiliary muscular support from the abdominal walls. But in the child-bearing female, in whom intra-abdominal pressure is enormously augmented, both by the gravid uterus and its contractions in labor, the entire ventral areas are put on a severe strain with a tendency to yielding in defective situations. The tendency to coeliac incisions is greatly increased after middle life, when degenerative changes have begun, and when hernia of every description are most numerous.

In those pot-bellied females whom we sometimes see after confinements, if they have suffered a laparotomy early in life, hernial protrusion is almost certain to follow. Doran denies that the manner of closing the incision has anything to do with the ultimate tendency to a giving way of the scar, and in this he is no doubt correct: nor have we any evidence that a forcible separation of the muscle-fibres in their long axis gives us any guarantee against prolapse, not provided by proper approximation.

It has been sought to obviate the tendency to these eventurations by the small incision: but we are not certain of this, and moreover, as our results after intra-abdominal operations depend on precision and exactness of detail in technique, with celerity of action, we must not be chary about making an opening, which will permit unhampered manipulation.

In our next contribution certain aspects of the morbid anatomy and pathologic changes of certain complicated types of post-operative eventurations will be considered.

Pharmacology and Therapeutics.

FORMALDEHYDE.*

BY O. HASENCAMP, M.D., TOLEDO, OHIO.

Professor of Principles of Medicine and Electro-Therapeutics, Toledo Medical College, Physician to St. Vincent Hospital, etc.

FORMALDEHYDE is a colorless gas, prepared by subjecting methylalcohol to oxidation. It has a pungent odor, and its chemical composition is CH^2O. It combines with hydrogen sulphide and with volatile compounds derived from ammonia, and therefore acts as a deoderant. It is readily absorbed by water and a saturated aqueous solution containing 40 per cent. of the gas forms a convenient method for applying it to its different uses. In this form it is placed on the market under the name of formalin, formol and formaldhyde.

Formaldehyde is equally active in gaseous as in liquid form. It forms in aqueous solution a stable, colorless, volatile fluid, practically non-poisonous, of a pungent odor, not inflammable, and is miscible with water in all proportions. It is an escharotic, and one of the most powerful antiseptics known. Formadehyde solution is most convenient for use in medicine and surgery, and in the form of gas it can be used for disinfecting rooms; cars, ships, with their contents, clothing, mail, books and other articles can also be readily sterilized by this method, which is generally done by using a special generator or lamp for producing the gas. It seems peculiarly adapted for this kind of disinfection on account of its harmless character and the freedom from damage of articles exposed to its action.

The *Medical News*, October 10th, 1896, reported that at the twenty-fourth annual session of the American Public Health Association, held in Buffalo, N.Y., September 17th, 1895, three very suggestive papers were read upon "The Use of Formalin as a Disinfectant," by Prof. Franklin C. Robinson, of Bowdoin College, and Drs. J. J. Kinyoun and E. A. de Schweinitz, both of Washington. A lamp for its generation was exhibited by the last named, and all papers cited remarkable instances of its penetrating and sterilizing powers. In one experiment infectious matter was introduced into the filling of mattresses, also smeared upon their surface and lightly rolled up inside them, and in both cases complete sterilization was effected by a comparatively short "charging" of the room with the vapor. It certainly seems as if this agent bids fair to become

* Read before the Northwestern Ohio Medical Association, at Defiance, Ohio, December 11th, 1896.

the chief reliance in house and car disinfection. A 1 per cent. solution requires less than fifteen minutes to kill the bacillus anthrax and spirillum cholerae, between fifty and sixty minutes to kill the staphylococcus pyogenes and the bacillus typhosis. A 1-1000 solution will thoroughly disinfect soiled or infected clothing if allowed to remain in the solution about twelve hours. Dr. Walter has made experiments to determine the bactericidal power of formalin. His conclusions, as published in the *Zeitschrift f. Hygiene and Infectious Krankheiten*, Vol. xxi., p. 241, 1896, are as follows: (1) A solution of formalin 1-10,000 checks the development of the bacillus anthrax, cholera, typhoid, diphtheria, and staphylococcus aureus. Very dilute vapors of formalin have the same action. (2) A 1 per cent. solution of formalin kills pure cultures of pathogenic germs in an hour. This action is still more marked in dilute alcoholic solutions. (3) A 3 per cent. solution of formalin disinfects the hands perfectly. Further experiments are required to determine any possible injury to the skin from its use. (4) Formalin powder disinfects without injury in twenty hours cloth and leather goods. (5) A. 1 per cent solution of formalin is an instant deodorizer of fecal matter. A 10 per cent. solution renders such matter sterile in ten minutes.

Formaldehyde solutions can be used to disinfect rooms by placing about in the room in flat dishes or spraying the air with a 1 per cent. solution. This will render the air pure and odorless in the sick room without injury to the patient or the most delicate fabric in the room. In ophthalmological practice it has perhaps been used more than in any other branch of medicine. It has the peculiar property of rapidly diffusing itself through the tissues, which gives it an advantage over bichlorid of mercury, because the latter coagulates the albumen near the surface, which prevents its further penetration into the tissues. Excellent results are reported in its use in infecting corneal ulcers and conjunctivitis. As a collyrium it can be used 1-1000 to 1-2000, and ulcers can be touched up with a solution 1-100 to 1-500. In the stronger solutions it is a mild caustic, and in the weaker solutions a mild stimulant. It has also been used in dentistry in acute pulpitis. Formaldehyde kills the sound pulp completely, without any more pain than accompanies the use of arsenic paste, with the advantage that the tooth can be filled at once without further cleaning, as it renders the remaining pulp antiseptic.

Formaldehyde has a wide field in preserving and hardening anatomical and pathological specimens. It has many advantages over Muller's fluid and alcohol. It penetrates, hardens and preserves tissues without shrinking. Another advantage is its cheapness and the ease with which it can be used. The tissues retain their natural appearance even to retaining their original color and transparency. Even in preserving specimens of the eye the crystalline lens does not become opaque for a long time. Dr. W. H. Wilder presented a paper and some beautiful specimens

before the American Medical Association in May, 1895. His method of preserving eye specimens was as follows: Immediately after enucleation the eye ball is washed and immersed in a 5 per cent. solution of the standard 40-per-cent. solution. In three or four days they are hard enough to bisect. If the vitreous is to be saved they had best be frozen before cutting. The part to be preserved is then treated accordingly to Priestley Smith's method, by placing it for twenty-four hours in a 33 1-3 per cent. and then in a 50 per cent. solution of glycerine and water. After this it is mounted in a glass cup of glycerine jelly made according to formula of Priestley Smith in 1884. To prevent the softening of this jelly it is well to first expose to the fumes of formaldehyde under a glass bell, which permanently solidifies it, and then seal the jar with a glass cap.

Flowers are said to be preserved in the fumes of formaldehyde and to retain their natural color. Formaldehyde is also used in the preparation of microscopical specimens. Dr. Cullen, of Johns Hopkins Hospital, in the *Canadian Practitioner*, describes a rapid method of staining fresh tissues by the aid of formalin. By its use a piece of tumor from the operating room can be examined and stained within fifteen minutes. The tissues take up the stain as well as when hardened by any other process. Urine can also be preserved by a weak solution of formaldehyde. It has the advantage that it does not stain or injure the hands or instruments in working with it. It has been used in treating tuberculosis, but I have had no experience with it. Dr. Hamaide, in the *Bulletin of the Academie de Medicine*, describes an inhaler for this purpose, which consists of two flasks, one holding a liter and the other 250 c. c. carbonic acid is generated in the first by means of bicarbonate of soda and tartaric acid, and passes into the other flask which contains a solution of formol, producing vapor for which it is the vehicle. The 40 per cent. solution of formaldehyde is used: 100 grs. of hot water are poured into the small flask, to which the formol is added from 160 to 180 drops. This produces a solution of 2 to 10 per cent. The vapors of formol are said to have been found very effective in pulmonary tuberculosis, accompanied by bronchial dilatation or pulmonary gangrene. They subdue coughing spells, and diminish rapidly and notably the quantity of fetid expectorations. The odor can be disguised with 40 to 50 drops of Austrian pine.

I have used it in the treatment of gonorrhœa in three cases with good results. I used the 5 per cent. solution, instructing the patient to still dilute it if it caused pain. In all three cases the discharge changed rapidly from a purulent character to a thin discharge and entirely ceased in about three weeks. In surgery it has been used to some extent; surgical dressings and material can be sterilized with it, and Hlavacek gives a valuable method of preparing catgut, in the *Wiener Klin. Rundschau*, February 8th, 1896. During the past few months I have used it in surgery

and also a preparation of formaldehyde and gelatine called formol-gelatine, as introduced and recommended by Dr. C. L. Schleich, of Berlin, in an elaborate and very interesting article, entitled: "Concerning a New Form of Antiseptic Dressing of Wounds," published in *Therap. Monats*, 1896. No. 2 is a product obtained by the action of vapors of formaldehyde on gelatine. The cells of the body disintegrate formol-gelatine into its chemical components, developing a continuous, minimal current of an antiseptic in its most potent form, which acts upon the wound and penetrates into all the interstices of the tissue. When placed in contact with uninfected tissue it is able to form a solid scab on primarily sewed wounds in a few hours, unaided by any other measures of disinfection. It checks acute purulent processes if the production of tissue and the development of formaldehyde vapors proceed undisturbed. In the presence of abundant necrotic material, however, the activity of the cell may be supported by pepsin muriatic acid digestion, by dusting the powder on the wounds as usual, and moistening same with the following mixture: Pepsin, 5 grs.; muriatic acid, 3 grs.: distilled water, 4 oz. I have used formol-gelatine on a number of wounds with excellent results. One was the gunshot wound of the hand, caused by a 22 flobert ball, making a punctured wound. I washed the wound with formaldehyde solution 2 per cent., and filled the wound with formol-gelatine. I dressed it again in a week, and the wound was nearly healed, and in two weeks it was entirely closed. I also used it on a crushed finger and several fresh cuts, followed by rapid healing. The last case I applied it on was a chancroid, which healed rapidly from the time I applied formol-gelatine, and in twenty days the ulcers were healed completely. In formaldehyde we have without doubt a valuable remedy, and future trials with it may even extend its usefulness. A. J. H.

STRONTIUM AND ITS SALTS*

BY ALEXANDER B. BRIGGS, M.D.

That the profession have in strontium salts, remedies of great therapeutic value is my firm belief, and my experience with them in practice during the past two years has very materially strengthened my faith in them. It has been a surprise to me in conversation with quite a number of my colleagues, to find that they are so seldom prescribed. That they have been of such signal help to me in my professional work, and that so little has been said and written about them of late, is my only excuse for bringing the subject before you to-day.

There seems to be an impression that there is more or less

*Read before the Washington Co. (R. I.) Medical Society, July 8, 1897.

danger in the use of the strontium salts from their toxic effects: this is wholly an error, as has been proved by the researches of such men as Professor Germain See, Dr. Constantin Paul and Dujardin-Beaumetz, who found that, in every instance where conflicting reports and toxic effects have been reported from their use, they were due to the presence of barium, which is found in the commercial product. When I have prescribed these remedies I have always used the pure salts (Paraf-Javal) or their solutions prepared by P. Chapoteaut, of Paris. At present I think strontium and its salts are unofficinal in the pharmacopœia, but nevertheless, the discovery of their therapeutical properties, and the good results in therapeia that have followed their administration, would warrant us in the belief that as they become better known and more often prescribed, they will become more highly appreciated.

The salts that I have most frequently used are the bromide, iodide and lactate and I will speak of them in the above order.

Bromide of strontium is a colorless, transparent salt, occurring in hexagonal crystals. It is somewhat deliquescent. The dose is from five grains to one drachm. It is not incompatible with the bromides of the alkalies, and it is soluble in both water and alcohol: it can be administered with all the alcoholic tinctures and most fluid extracts. Its indications for use are those of bromide of potassium, and while it is a perfect substitute for the potash salt, its prolonged use even in large doses does not seem to produce the untoward results so often noticed in the use of the former salt. The gastric disturbances, the cutaneous eruptions so often noticed in the use of the potash salt, are not seen when the strontium salt is used; again, the depressing and systemic agitation from the prolonged use of potash, which all have encountered in practice, I have never seen from the strontium bromide.

In cases of epilepsy and other spasmodic neuroses, where the potash salt has been given for a long time, the patient thereby becoming insusceptible to its action, the strontium salt may be substituted with safety and great advantage.

In many diseases of the stomach, the bromide salt will be found of especial benefit. In three obstinate cases of vomiting of pregnancy in which I have prescribed the drug during the past year, two received signal benefit, while in the third case it seemed to have no marked effect upon the vomiting, as the stomach would not retain the remedy: in this case it appeared to have some reflex effect upon the vomiting centre, when given in drachm doses per rectum every six hours, and it was so administered for several days in connection with other treatment.

In one case of hyperæsthesia of the stomach that accompanied and followed ulceration for several weeks after I was satisfied the ulcer had healed, the neuroses promptly yielded to ten grain doses of the drug, given one half hour before food, and there was no return of this most distressing symptom.

A patient suffering from exophthalmic goitre about a year ago,

consulted a specialist in regard to a severe tinnitus aurium from which she suffered; bromide of potassium was prescribed in full doses. At first the patient seemed to get some relief from the remedy and it was continued for several months; during this time the patient developed severe mental exeitement with true delusions. Suspecting the remedy, it was discontinued and in a few days the mental excitement subsided with a marked increase of the tinnitis. At this time, strontium bromide was substituted with fully as good effect upon the symptom, and the patient has continued to take it during the past three months, with no return of the mental excitement; the delusions continue however.

We are occasionally consulted by a class of patients that are plethoric; who complain of a general feeling of lassitude, frontal headache, constipation, a disposition to sleep all the time, various skin diseases: the urine is loaded with urates and frequently the heart's action is feeble, due to commencing fatty degeneration: these patients are sometimes fat, other times lean, but are always overfed. Any or all of these symptoms may exist, but will surely be relieved by the use of bromide strontium administered before meals, accompanied by a restricted diet.

In other cases of digestive disorders accompanied with acid fermentations, and the formation of the gases of decomposition with chronic diarrhœa, the bromide has given me excellent results.

Strontium iodide occurs in colorless, transparent, hexagonal crystals, having a bitter saline taste, freely soluble in water and alcohol. Like the bromide salt it is incompatible with solution of the sulphates and carbonates of soda, potash and lime, but is not incompatible with other iodides.

Iodine of strontium is an excellent tonic and alterative and may with safety be prescribed in any case where the potash salt is indicated. In quite an extended use of the drug, I have never known it to induce the gastric irritation or palpitation of the heart so common in the administration of iodide of potash in full doses. Its effects in catarrhal asthma, chronic bronchitis and cardio-pulmonary affections have been most satisfactory. The drug is quickly eliminated by the kidneys, the strontium seeming to supplement the action of the iodine by its own peculiar action on the functions of nutrition.

In connection with the above, I wish to report the following case:

Mr. B., age about seventy, has had a catarrhal bronchitis accompanied with asthma for the past ten or fifteen years. At the time the strontium salt was prescribed he presented the following conditions: catarrhal bronchitis of both lungs with paroxysmal attacks of asthma, bad cough with profuse expectoration, has been unable to lie in bed for over two years, body emaciated, appetite poor, urine scanty, no sugar or albumen present, marked artero-sclerosis œdema of both feet and legs; pulse one hundred to one hundred and twenty per minute, mitral insufficiency with dilation of the

heart, takes little food. For several weeks, from one to three pints of water had exuded from the feet and legs every twenty-four hours. The patient had been treated with iodide of potassium at various times, always with considerable relief, but he had been unable to continue the drug for any great length of time or in anything like the full dose on account of the gastric irritation which it produced. We began the treatment with ten grains of strontium iodide every six hours, subsequently the dose was increased to twenty grains. Within one week all the symptoms had improved. The cardiac functions were better performed, the asthmatic attacks had subsided, and within one month the patient was able to move about the house. The remedy has been continued about every other month during the year, and I have seen the patient at work in his garden within the past week.

From my observations of the action of the iodide of strontium, I am satisfied that it is safe to prescribe it as a substitute for the potassium salt, and while the dose is about the same, the remedy can be pushed to a dose far beyond the limit of safety with the potassium salt and that without fear of producing symptoms of intolerance.

Strontium lactate is a white granular powder, odorless, and has a slightly bitter, saline taste. Soluble in about four parts of water and freely soluble in alcohol: dose from five to sixty grains. Cases are reported where as much as one hundred and sixty grains have been administered with no untoward effects. The lactate has been often prescribed for Bright's disease both in acute and chronic forms, with excellent results. Constantin Paul concludes that it is indicated in parenchymatous nephritis, the rheumatismal and gouty forms, but is not useful in interstitial nephritis Dujardin-Beaumetz confirms these statements and says that when he had administered the remedy in cases of albuminuria, he has obtained uniformly a reduction in the quantity of albumen passed; that while it affects the most important symptoms favorably, it does not remove the pathological condition. The remedy possesses the advantage over other drugs in the treatment of this disease, in that it promotes the appetite, aids digestion and assimilation, and can be administered for a long time continuously with no bad effects.

In two cases of albuminuria of pregnancy, in which I have made use of the lactate, the most gratifying results have followed. In one case where there was severe headache, insufficient urinary discharge, general dropsy and the symptoms of uremia present, and where diuretics, purgatives and diaphoretics had signally failed to give relief, the lactate was substituted in fifteen grain doses every four hours, with a marked diminution of all the symptoms and with a decrease of more than one-half the amount of albumen excreted within forty-eight hours. The improvement in the general condition of the patients was noted from the beginning of the treatment.

In several cases of cystitis in the aged, due to hypertrophy of the prostate, the drug was given in connection with buchu with

marked amelioration of the symptoms. Although the lactate does not seem to possess any diuretic properties, nevertheless its action upon the urinary organs seems to be salutary in the extreme.

Professor Germain See, in the treatment of affections of the stomach, considers the strontium salts as far superior to the alkaline carbonates.

Bartholow states that the phosphate of strontium appears to rather improve the appetite, promote the activity of assimilation and increase the body weight. The phosphate more especially is a reconstituent, an agent having the power to increase the nutritive energies. Recently the salicylate of strontium has been highly extolled in the treatment of rheumatism. I have, however, had no experience with the drug.

For a number of years I have been satisfied that many of the untoward symptoms that follow the use of the potash salt in full doses, are due as much or more to the potash which they contain, as to the iodine or bromine. As we all know, potassium is always a poison, even in small doses when often repeated. In bromide of potassium, potash constitutes one-third of the salt, and when given in large doses it cannot fail but exert its toxicological effects.

Well known authorities have long ago demonstrated that there was far less danger in the use of the sodium than the potash salts.

If we have in the strontium salts, remedies that can be used in full doses and for a long time without the unfortunate effects that sometimes follow the use of the potash salts, it behoves us to give our patients the benefit of the fact. A. J. H.

Medico-Eleemosynary Institutions.

ONTARIO INSTITUTION FOR THE DEAF AND DUMB.

THE instruction of the deaf enlisted the sympathetic efforts of philanthropists at a comparatively early stage in the history of this country, as the following list of Canadian schools for the deaf will show:

1. Catholic Male Deaf and Dumb Institution for the Province of Quebec, Mile-End, near Montreal, P.Q., opened 1848. Rev. Alf. Belanger, C.S.V., Director.

2. Catholic Female Deaf and Dumb Institution, Montreal, P.Q. (595 St. Denis Street), opened 1851. Sister Philip of Jesus, Superioress.

3. Halifax Institution for the Deaf and Dumb, Halifax, N.S., opened 1857. James Fearon, Principal.

4. Ontario Institution for the Deaf and Dumb, Belleville, Ont., opened 1870. Robert Mathison, M.A., Superintendent.

5. Mackay Institution for Protestant Deaf-Mutes and the Blind, Montreal, P.Q., opened 1870. Mrs. H. E. Ashcroft, Superintendent.

6. Fredericton Institution for the Education of the Deaf and Dumb, Fredericton, N.B., opened 1882. Albert F. Woodbridge, Principal.

7. Manitoba Deaf and Dumb Institution, Winnipeg, Manitoba, opened 1888. D. W. McDermid, Principal.

The most important of these schools, both on account of the value of the buildings and grounds, as well as the number of pupils, is the Ontario Institution for the Deaf and Dumb, at Belleville, Ont. It is simply a school for the education of the deaf, and children who are mentally deficient to such an extent that they are incapable of material advancement are not admitted.

A great many people have, unfortunately, a very erroneous idea as to the mental and moral characteristics and capabilities of the deaf. The first efforts towards educating the deaf were made in Spain and France some one hundred and fifty years ago. Previous to that time they were universally regarded as quite incapable of receiving instruction. In course of time, however, doubt and opposition vanished before the light of demonstrated results, and now every civilized nation in Europe and America provides facilities for the education of the deaf, although even to this day not a few people class the deaf with imbeciles and idiots. This is no doubt partly due to the seeming stupidity of the uneducated deaf, caused by their absolute dearth of verbal language, the consequent and necessary paucity of their expressible ideas, their inability to make hearing people comprehend even such ideas as they may wish to express and the shyness arising from their realization of this incapacity.

As a matter of fact, however, the deaf are in all respects similar to hearing people, with the one exception of their deafness: and even this deprivation is not so great as it seems, since it is to a considerable extent compensated by the abnormal development of some other senses. Of course there are among the deaf some stupid ones, and a few even more than stupid, just as there are, and in quite a large proportion, among the hearing: but in natural ability and mental capacity the deaf are fully up to the average of hearing people, and there cannot be found in any public school in Ontario a brighter lot of boys and girls than those at this Institution. The spectacle of these children assembled in the chapel, or in the class rooms, or on the playground, is an interesting and inspiring one. The loss of the one sense has induced the superlative development of the other senses, and their acuteness of observation, vivacity of manner, mobility of expression and lightning-like rapidity of movement, is a revelation to those unaccustomed to associate with them. In a great majority of cases the deaf are eager to learn, and they acquire knowledge with wonderful facility in view of the fact that they are deprived of the chief medium for its acquisition. In point of morals the deaf are perhaps superior to the hearing, not that they possess less inherent evil, but because their deafness, and

INSTITUTION FOR THE DEAF AND DUMB, BELLEVILLE, ONT.

OFFICERS, TEACHERS AND PUPILS.

partial isolation, renders it more difficult for them to learn and to practise evil habits. As a rule the deaf are very susceptible to religious influences, and are much more reverent than hearing people, which is doubtless due to the fact that they do not hear sacred things so flippantly and familiarly spoken of as other people constantly do.

The educated deaf communicate with hearing people chiefly by writing, but with each other they converse principally through the medium of signs, and these they use with astonishing facility, the average deaf person being able to express his ideas in signs more rapidly than a hearing person can in words. The sign language is wonderfully and often eloquently expressive of the common sentiment and experience of life. It is, however, best adapted to convey concrete images, and is comparatively impotent to express abstract or abstruse ideas.

One of the many erroneous ideas prevalent relative to the deaf is that those classed as deaf-mutes are dumb in the sense in which they are deaf. They are deaf because of some defect in the organ of hearing. Many people think they are mute because their organs of speech are defective. This is by no means the case. With very rare exceptions the organs of speech in the deaf—even of the congenital deaf—are as perfect as in the hearing. They cannot talk simply because they do not know how. The process of learning to talk is by hearing others talk, and imitating them. If a hearing child were brought up under conditions which precluded it from ever hearing the sound of speech, it would be as mute as a deaf child, except to the extent to which it might imitate the sounds of animals and birds, and for exactly the same reason. On the other hand, if all the deaf children in Ontario had their hearing restored to them, doubtless all of them would in a short time be able to talk as well as other people. The older deaf persons, however, would have more difficulty in learning to talk, perhaps those well up in years could not learn at all, for the reason that their organs of speech would probably have become atrophied from life-long disuse. One of the most interesting processes in the education of the deaf is that of teaching such of them to talk as are capable of learning. This is a difficult and tedious task, however, and not always a satisfactory one, for, while perhaps twenty per cent. of them could be so taught, their speech, except in rare cases, is not easily understood by those unaccustomed to it, and is as a rule by no means pleasant to hear, since, being deaf, they have no guide by which to modulate their voice. This same defect is seen in people who lose their hearing late in life. In almost all such cases the voice, as years pass by, becomes more and more monotonous, indistinct and expressionless.

There are in Ontario, according to the census of 1891, about 2,500 deaf people, being about 9.97 to every 10,000 inhabitants, as compared with 5.74 in Great Britain and Ireland, 8.75 in Germany, 6.60 in France, and 24.52 in Switzerland. The causes of deafness are manifold. Of the 1,113 pupils who have been enrolled at the

CONVENTION OF GRADUATES OF THE ONTARIO INSTITUTION FOR THE DEAF.

Belleville Institution since its erection in 1870, 433, or nearly 40 per cent. of the whole, were congenital deaf-mutes: the others became deaf through illness or other causes. Scarlet fever is the most prolific source of this affliction, 77 having lost their hearing from this disease, 28 from brain fever, 21 from spinal fever, and 51 from various other fevers. Other spinal diseases were responsible for 42 cases of deafness in addition to 24 caused by cerebro-spinal meningitis. Simple colds caused 43 cases of deafness, measles 37, falls 22, vaccination 18, whooping-cough 15, inflammation of the brain 12, fits 10, and various other complaints from 9 to 1, while in 156 cases the causes were unknown or undefined.

Of those who became deaf after birth, 120 lost their hearing when one year old, 132 between one and two years of age, 117 between two and three, 63 between three and four, 40 between four and five, and so on down to 2 between fourteen and fifteen, while in 121 cases of those not born deaf the age was unknown.

The relationship of the parents of these 1,113 children was as follows: First cousins, 57: second cousins, 25: third cousins, 20: distantly related, 26: not related at all, 957: unknown, 38. These figures tend to controvert the prevalent idea that near blood relationship of parents is a chief cause of defects in children.

The numbers of deaf-mutes in families were as follows: Two families contained five deaf children in each, 5 families contained four each, 14 families contained three each, 71 families contained two each and 899 families contained one each. It might be well to say, in relation to the above statistics, that, while in the main no doubt correct and reliable, yet in not a few cases parents have been known to give false information, so that it is difficult to obtain strictly accurate data.

One of the illustrations accompanying this article is a photograph of the officers, teachers and pupils ranged in front of the main building of the institution. The other is a picture of the convention of deaf-mutes of Ontario, which was held in Brantford in 1896.

The duty of physicians relative to the deaf seem clear and well defined. There is reason to believe that there are in Ontario a considerable number of deaf children of school age who are not attending the institution, due either to the ignorance of the parents, their indifference to their children's welfare, or their selfish refusal to part with them. Every such case is doubtless known to the family physician, whose duty it is, in the interest of the child, to report the case to the Superintendent of the Institution, and to use his personal influence to induce the parents to send the child there at once. The condition of the uneducated deaf is a sad one indeed, and their sense of isolation terrible beyond the power of words to express; and every lover of humanity, as all physicians should be, should put forth every effort to induce or compel parents of the deaf to send their children to the institution, where they will be assured, not only of a good education, but of a comfortable home and the most kind and careful attention to every detail of their physical, mental and moral welfare. G. F. S.

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Editorials.

CHRISTIAN SCIENCE vs. MEDICAL SCIENCE.

THAT a great many people are afflicted with suppositious diseases is quite true, and that they are sometimes relieved by a faith-cure or by suggestions is also well known, otherwise it would be difficult to understand how the members of the Christian Science Church can contend that "since they had come to Christian Science, they found that God was sufficient; but that, prior to that time, they had been continually taking drugs and paying doctors' bills." What their diseases were is not specified; but evidently they were not amenable to ordinary therapeutic agents, for the complainants

grew weary of paying for pharmacal and non-pharmacal preparations, which did not cure them, and elected to pay their money to a church, whose special office it is to heal "the ills that flesh is heir to." Their present condition of contentment and freedom from bodily ills contains a warning to the unwary clinician. Real diseases depending on the action of a contagium, a toxin, a chemical poison, or a degeneration of tissue, the Christian Scientists cannot cure and they know it well. When patients with functional complaints, such as fall to the lot of this healing church, appear before the physician, why prescribe useless medicines? Either the physician believes the patient's tale of woe or he does not. If the former hypothesis be true, then the diagnosis is faulty and the treatment by drug a failure. If he does not believe in the patient's representations, he should not waste good medicine in a sound stomach, when it is really a morbid imagination which requires treatment.

Would it not be more in keeping with science, if he were to hand over such a case to a specialist in hypnotism? Certainly this would seem to be a correct procedure, unless the physician is himself a hypnotist having such influence over his patients that, no matter what medicine he prescribes, the result he has expected invariably follows. This healing power is, however, due to faith in the physician and is only another form of suggestion.

The difficulty with many well-read, honest physicians is, that, being always serious themselves, they take the complaints of men and women in a thoroughly serious way, and so, through lack of discernment, prescribe for real diseases and imaginary ailments the same or apparently the same formulæ.

Now, however, when a church, with a total adult membership of 385 persons, an annual income of $7,237.40, and a Sabbath-school, having an attendance of 65 children, flaunts its contempt for physicians and modern pharmacy in the daily papers, it is high time for practitioners to revise their therapeutics. Among some of the questions they might try to solve, it might be appropriate to ask themselves, since a large number of *bona fide* patients go or are brought to the hospitals, if it would not be profitable to devote more time to studying the idiosyncrasies of the patient, and less to reading about the action of medicines, and, again, if they would not be more successful, were they to cease treating some patients with good allopathic remedies, who could really be cured by some form of suggestion.

J. J. C.

THE NEW THEORY OF SEX DETERMINING.

WONDERS will never cease. During the past month the wonderful cable has been ticking a wonderful message, and across continents it has speeded and been recorded in all the daily newspapers. This message is from a scientist, Prof. Schenk, a man we should respect, a student, sincere, and we believe as much in earnest over working out his problem of "Sex Determining," as if he had discovered a panacea for all the ills that flesh is heir to. He has robbed the fairies and storks of their poetic mission. Little lives will come no longer, as Wordsworth taught us,

> "Not in entire forgetfulness,
> And not in utter nakedness,
> But trailing clouds of glory do we come
> From God, who is our home,"

but will simply be little Moses, the product of brown bread and walnuts, or little Queenie, the assimilation of ice cream and chocolate caramels.

Alas! the disappointment if one walnut too little has been prescribed and a tiny queen asserts her right to reign, and despite the experiences of Hall Caine accompanies her breathing by a weeping solo, and the poor little expected Moses is lost forever to fame, and there is one "briefless" lawgiver less.

We are promised all the formulas of Prof. Schenk's treatment soon. After all, is science kind to us in revealing such prosaic details, and possibly giving a wider scope for blame to long-suffering physicians, in fact making them in a certain sense the arbiters of human destiny? All through the centuries the Divine Intelligence has been praised or blamed for the sex of the clay casket into which He breathed the wonderful vital principle we call soul. But from this time the credit or censure shall be given to oats, nuts, and barley! All, be they patrician or plebeian, must bow to the new deities. Well, it means much this new theory: "The Auld Kirk Lichts" will have to revise their doctrine of election, or things will surely get "dreadfully mixed."

The responsibility of the physician, if this theory should prove a verity (so far, we are agnostics or know-nothings on the subject) is overwhelming to contemplate: to aid others in determining a life that may prove a dead failure and curse the day it was born, is not pleasant business. But we suppose this duty will belong to

Specialists, and so, the gods be praised, the old general practitioner need not have this new sin laid to his charge.

Soon everything we held sacred will become so material that the halo of reverence that has shrouded life will disappear, and perchance we may forget to strain our ears to catch an echo of the song the angels sang, heralding the birth of an Infant, the only music in His wondrous life. Few words tell the story of the most successful and brightest human life, and fewer still of the earthly life of The Perfect Man—"acquainted with grief." W. A. Y.

MEDICO-LEGAL ASPECTS OF EMBALMING FLUID.

THE composition of embalming fluid is likely to prove of interest to physicians, now that it is beginning to be mentioned in connection with trials for poisoning by arsenic. There are different kinds of embalming fluid. The following are two of the common formulæ, used in its preparation:

(1)	℞	Arsenious acid	℥ vi.
		Mercuric chloride	℥ x.
		Alcohol	f ℥ ix.
		Sol acid carbolic, 5 per cent.	f ℥ cxx.
		Red aniline	q.s.
(2)	℞	Pulv. Alum	lb. v.
		Arsenious acid	gs. e.
		Water	℥ xxxij.

Arterial embalming consists principally in the removal of blood from the vessels of the body, followed by the injection into an artery of a quantity of embalming fluid, sufficient to fill the arterial system. A limited form of embalming, practised in a good many cases, consists in the introduction of a certain quantity of fluid by the aid of a trocar and canula into the thoracic or abdominal cavity, or into both these cavities, the arterial injection not being attempted. In other cases the fluid is injected through the nostrils into the naso-pharynx, thus reaching the eyes, maxillary and frontal sinuses, and afterwards finding its way into the lungs and stomach. When the arterial system is filled with an arsenical fluid it follows of necessity that arsenic will be introduced into the tissues of the stomach, liver, spleen, kidneys, and other viscera. Assuming then that an individual has been done to death by arsenic, it would

be in the interest of the murderer that the corpse should be embalmed arterially with a fluid such as one of the above, because for obvious reasons the subsequent discovery of arsenic in the viscera by a chemical expert would be of no legal value in showing that arsenic had been administered with criminal intent during the lifetime of the deceased. The proof that the deceased had been poisoned with arsenic would then rest on evidence of the symptoms, exhibited during the illness, which preceded death, and the post-mortem appearances of the mucous membrane of the stomach and intestines. Another important point is that the majority of the undertakers do not know the composition of the embalming fluids used in their business, as they purchase these articles from jobbers, who keep the formulæ secret. The arsenical fluids being cheap and reliable are most used.

Then there is nothing to excite suspicion in connection with embalming, which has, in fact, become quite common in Ontario. A good authority states that in cities and towns an average of 60 per cent of the corpses of adults are prepared for sepulture in this fashion; in well settled country places, 40 per cent. These facts being known, it ought to follow, that a fluid quite as effective for the embalmer's purpose and devoid of objectionable qualities, from the legal standpoint, should be introduced. We understand that unobjectionable embalming fluids can be obtained at reasonable rates, and we have also been informed that such fluids are now used by Toronto undertakers.

At a joint meeting of Canadian and American executive officers of Health Boards, undertakers and baggage agents, held at Cleveland, Ohio, June, 1897, Mr. Hohenschuh, a prominent undertaker, stated that he had in every-day use, for embalming purposes, a fluid which is cheap, readily used, and wholly free from poisonous metals. This is a 40 per cent. aqueous solution of formaldehyde, which is now commonly used by sanitary authorities for disinfecting purposes. As an evidence of the suitability of this agent for embalming purposes, Mr. Hohenschuh stated that the body of a sheep, which had died of anthrax, and had subsequently been embalmed with formaldehyde, had been kept without offence for over two years.

This information is of sufficient importance to merit the attention of the Provincial Board of Health, and should Mr. Hohenschuh's statements be substantiated, it would be proper to advise the Provincial Government to introduce legislation, declaring the

use of arsenical or other dangerously poisonous fluids in the embalming of dead bodies to be illegal.

As an evidence of good faith the formula of every embalming fluid, used or sold in Ontario, should be sent to the Secretary of the Provincial Board of Health. J. J. C.

EARNEST HART, M.R.C.S., D.C.L.,

Editor of the *British Medical Journal.*

Medical journalism throughout the world has sustained an irreparable loss in the death of Earnest Hart. For few, indeed, and benighted, are the portions of this Globe where the *British Medical Journal* has not been read and appreciated.

As editor of this journal, Mr. Hart deserves unlimited praise. When he became the editor its circulation could only boast of a few hundred; with his vacated editorial chair he has left an unrivalled medical journal, whose circulation is about twenty thousand—a credit to his ability, an honor to his name, and a boon to medical men throughout the world.

As a philanthropist, sanitary reformer, and *littérateur*, Mr. Hart has taken a high place among his peers. As a politician, he has done much useful work in the lobby of the House of Commons.

His ideas of medical journalism and journalists are unique. A few quotations from one of his addresses on this subject may prove of interest, as clearly setting forth in a concise manner his views:

"The Ideal Qualities of the Journalist.—The ideal journalist needs to cultivate many qualities which it is not always easy to combine. He should have rapidity of initiative and promptness of decision, for slow deliberation is the grave of opportunity. He needs quick and catholic sympathy; for this is a great source of power; but a corresponding capacity for just indignation is its necessary correlative and qualification."

"Powers, Privileges and Pains.—With its privileges and responsibilies come many pains. Journalism entails much sacrifice. An editor needs, and must have, many enemies; he cannot do without them. Woe be unto the journalist of whom all men say good things. A man, says Oliver Wendell Holmes, whose opinions are never attacked, is beneath contempt. For every real thought on every real subject knocks the wind out of somebody. . . . Editorial work, like all other good work, is largely one of self-sacrifice. It is the grave of literary reputations and the despair of

literary ambition. In writing leading articles, as Washington Irving found in voluminous correspondence, "your mind is torn from you in strips and ribbons," which are scattered to the wind, and your thoughts leak out in driblets which barely moisten the earth."

"LITERARY STYLE, ETC.—That brings us to the subject of literary style in medical journalism, which may be dismissed, however, in very few words. An editor is often asked by young writers: 'What style would you recommend me to adopt? and what advice can you give me for writing in your journal?' I don't know what your view may be, but it has always seemed to me desirable to recommend the avoidance of style, and to advise those who seek counsel on style, consciously to avoid it and to try chiefly to say what they have to say as clearly as possible, and to seek mainly the accurate expression of precisely the shade of meaning which it is intended to depict. It is a golden rule to think out clearly and precisely what there is to say, and to say it shortly and without ambiguity. People who are anxious about style are generally those who have little or nothing to say, and they are precisely those who take longest in saying it. It is generally difficult to say nothing without saying it at great length, and medical stylists are among the bores of the profession and the terrors of the medical journalist."

"We journalists need not be so much afraid of making a mistake from time to time. As your ambassador said not long since, at the Mansion House, London, to the great delight of his hearers: 'The man who never made a mistake never made anything.' We can all try to make as few as possible, but it has been truly said, that genius consists not in never making a mistake, but in never making the same mistake twice over."

As to the personality of Mr. Hart, he was of Hebrew ancestry. His wife had studied medicine in Paris, and we find during his late years he had great sympathy with the medical education of women. Although he showed great appreciation and capacity for the enjoyment of life, his hours were too full of work, and he found little time for recreation. One hobby he cherished—the study and collection of Japanese works of art.

The splendid stoicsm of the man showed itself in the way he endured the amputation of his leg, and the calm courage with which he looked forward during his last days to death. Quietly the grim monster claimed him—he fell asleep like a tired child.

W. A. Y.

PUBLICITY IN CRIMINAL TRIALS.

Recently Canadians have been startled by the trial of a woman for procuring the death of her husband by the administration of arsenic, and the effect on the public mind has been all the more unpleasant because the trial was held in the ordinary way, women as well as men being present in the court in considerable numbers. The expert evidence given by physicians and a chemical analyst were listened to by the audience, and a perilous knowledge acquired, altogether unnecessary for their instruction or future happiness. On the following day, through the activity of the daily press, the evidence given in the little court-house at Cayuga was carried into thousands of homes. To what good? None, certainly, except to gratify an unhealthy and perhaps dangerous curiosity. Some readers of such evidence may have been tempted to commit such a crime, and may have refrained, not from the dread of guilt, but simply because they did not possess the requisite skill in administering the drug, in selecting the food or drink in which it may be most conveniently given or a knowledge of the dose that may be used at one time, so as not to excite the suspicion of friends or, perhaps the medical attendant. We hope that the growth of modern civilization and the teaching of Christianity will triumph over the suggestions of evil, which must necessarily rise in many minds from the acquisition of such dangerous knowledge. And yet are the men and women of our day so very different from the people of the last century, when poisoning was secretly taught in France by Signor Exili. That gentleman found very apt pupils in Madame de Brinvilliers and others, who, for revenge or with the hope of gain, were anxious that certain inconvenient persons should go over to the silent majority. In our days, owing to the development of life insurance, a great many persons are interested in the deaths of other persons, and it is not in keeping with propriety, that justice should light the way to crime, by showing with what facility and certainty death may be caused, through the administration of deadly drugs.

There is, however, one consoling feature in this blazon of crime through the court and the press, and it is that, though the knowledge of how to commit murder by arsenic may through the newspapers reach the eyes of thousands of readers, the antidote to such knowledge accompanies the poison, for the conviction must grow

that the associated sciences, which discover the use of poison as the lethal agent in any given case have vastly improved in recent years. Formerly, symptoms passed unrecognized, which nowadays would excite suspicion and lead to an inquiry. The existence of a sound knowledge in pathology, microscopic anatomy and toxicology must, therefore, be taken into account and read side by side with the history of the poison used to kill and the fact that it did actually cause death. Even supposing every precaution to be taken, and the competence of physicians to recognize symptoms of secret poisoning during the life of the victim or after his death acknowledged, the conviction must still grow on us, that it would be more politic if such a trial for murder by poison were conducted in camera. We are all imitative; vice or virtue, like good or bad manners, are more or less catching, so that a popular mania, even for forbidden things, is sometimes hard to control. In our day there is the morphine mania, which promises to become a great scourge. Then our readers also know that there are other popular, harmful manias, whose recent growth has been so great as to be a menace to our race.

Admitting the fact, then, that the development and growth of popular manias are, as it were, ordinary occurrences of human life, it is reasonable to conclude that, during trials for criminal poisoning, judges should not permit the dangerous knowledge of expert scientists to become the common property of the curious and the evil-minded, but, when the occasion arises, should not hesitate to exclude the general public or, at least, request the reporters to withdraw from the court. J. J. C.

THE DEAF MUTES OF ONTARIO.

We are indebted to our correspondent "G.F.S." for the very instructive and interesting article on "The Ontario Institution for the Deaf and Dumb," which appears this month: the cuts for the accompanying illustrations are kindly sent by Superintendent Mathison. In one of the statistics, we notice that twenty-four cases of deafness are credited to cerebro-spinal meningitis, and twenty-one to spinal fever. These were, probably, all cases of cerebro-spinal fever, which as prevailed in an epidemic form, from time to time, in different districts of the United States and Canada.

The statement that eighteen cases of deafness were due to vac-

cination ought to be supported by any available evidence, and the unsupported assertions of parents or friends should be accepted with a due allowance for error or prejudice. If the truth of this charge can be demonstrated, it ought to be accepted as a valuable contribution to medical science. If the contrary is the case, it is mischievous, and may do harm by serving as ammunition for the army of anti-vaccinationists.

The statistic showing that in the Belleville cases blood kindred in the parents has not been largely operative in the production of congenital deafness in their children is noteworthy, as it is in opposition to the recorded experience of observers in other countries. Citations from American, Canadian, English, Irish, French, Belgian, German and Swiss reports could be given, showing a consensus of opinion among authorities on the influence of consanguine marriages in developing deaf-mutism in the children born of them.

It would be interesting to learn what the opinion of the Belleville Institution authorities may be as to the advisability of permitting marriage between former pupils. From the statistics of other schools, it appears that the law of heredity is adhered to in intermarriage of the deaf, and that such intermarriages are a fruitful cause of deafness, some authorities contending that an average of about 5 in 100 of the children born of deaf-mute parentage will be deaf-mutes, over against 1 in 1,500 of the general average of the community at large.

Even, however, if we accept these data it would be rather inconsistent to counsel the State to place restrictions on the intermarriages of deaf-mutes, whose infirmity may be due in the first place to a constitutional taint, unless we are prepared to take a similar stand against the intermarriages of the scrofulous, the tubercular and the syphilitic.

There can be no doubt that scarlatina is a direct source of deafness, because the inflammation which it causes in the naso-pharynx of the patient occasionally extends through the Eustachian tubes to the middle ears, producing perforation of the tympana, and partial or complete loss of the ossicles. In other cases of scarlatina, the inflammation which extends to the middle ears, is not destructive in character: but a chronic, proliferating inflammation of the middle ears is established and deafness results. It can be affirmed, however, that in the treatment of cases of this disease the regular and methodical application to the naso-pharynx

of the patient of suitable gargles, sprays or washes would largely prevent such disasters. Should an inflammation of the middle ears occur, the patient should be treated by an otologist. After the termination of the disease the patient's hearing ought to be tested. Suitable treatment of the throat and nose should also be practised in cases of measles, whooping-cough, and all severe inflammations of the throat. The enforcement by the municipal health authorities of isolation and disinfection during outbreaks of the above mentioned diseases would also tend to reduce the proportion of cases of acquired deafness.

Parents should be cautioned against injudicious methods of cleaning the ears of infants and young children, particularly by screwing into their ears the twisted corner of a towel. The use of the ear-scoop should be forbidden, and only the gentlest syringing advised in suitable cases.

These details, touching some of the causes of acquired deafness in children, are mentioned here with the hope of aiding in the reduction of this terrible evil by preventive measures. Occasionally cases of catarrhal deafness are cured by treatment. Two pupils of this class were treated successfully at Belleville during the past year. Generally speaking, however, it may be said that, where the organs of hearing are so injured that deafness results, the mischief is irreparable. Certainly in congenital deafness treatment is useless.

By education, however, much has been done to remove the disabilities of the deaf and raise them to a high level of intelligence. To place the deaf on the same plane of power and learning as the hearing, is an object to be striven for by the teacher; but, owing to the impediments imposed by the pupil's deafness, the progress and development of deaf children must necessarily be slower and more tedious than is the case with hearing children.

Only an educator of the deaf, and an eloquent one at that, can give adequate expression to the changes produced by instruction in the mind of a deaf-mute. Rev. Dr. W. W. Turner, of the Hartford Asylum, writes: "The most intelligent deaf-mutes, after a careful inquiry made at different stages of their instruction, uniformly testify that they never had any idea of God or of their own soul previous to instruction: that they either had never thought on the subject, or, if they had, concluded that all things ever had been, and that death was the termination of existence."

To stretch forth a helping hand to such unfortunates, to lead

them, step by step, from the darkness of their prison into the sunlit world of thought: to place them in right relations to their fellow-men and the duties of life is indeed a very noble office. We cordially hope that the good work done at the Belleville Institution during the past twenty-eight years may continue, and that the results of its future may even surpass the very brilliant record of its past and present. J. J. C.

ON THE INSTABILITY OF DOCTRINAL PATHOLOGY.

To the observing, reflective mind of every one who has passed through even but a few decades of experience in medicine, there is nothing more striking than the ever-changing dogmas of pathology. We have been led to this reflection by an important contribution, appearing in the *Edinburgh Medical Journal* for October ('97) on the subject of "Experimentation on the Spines of Lower Animals."

During the course of these researches the experimenters removed in sections, and completely, the whole spinal cord. But in none of these cases was there disturbance with digestion; there was no vesical paralysis, nor were the rectal reflexes in abeyance.

In the case of a pregnant bitch, she gave issue to a litter of pups, after the whole dorso-lumbar segment of the cord was removed. Irritation of the bladder or the rectum produced prompt contraction, although they periodically emptied their contents unaided. In the face of the "principles" of neural pathology, this seems a most remarkable contradiction. Where, indeed, are the spinal ganglionic centres, presiding over the motor nerves of the bladder, the uterus and rectum?

Authors have most certainly, with great care and minuteness defined the various sensory and motor areas of the spinal cord. And, of late years, these areas have been so elaborated and differentially designated, that the study of the brain and cord and their topography has become one of the most complex and difficult, for the student in anatomy. Long since, as far as traumatisms are concerned, at least, the writer has repeatedly been able to demonstrate that the doctrine of "cerebral localization" has no foundation: and it appears now, from many recent clinic reports, that it is a most fallacious guide in pathologic conditions within the cranium.

The recent experiment referred to again revives our belief in the rather ancient doctrine of the duality of the nervous sytem; *i.e.*, that the cerebro-spinal and sympathetic systems are separate,

and yet one: as the one evidently can reciprocally perform the functions of the other. Here we have the spinal neither cord cleared away, yet sensation nor motion is completely destroyed. How can we pretend to speak of "arm and leg centres" in the cerebrum, or say that this organ is the centre of the spinal senses, while, as a matter of simple demonstration, it may be entirely ablated in the pigeon, after which the biped freely moves the wings, walks and suddenly jumps on the firing of a pistol.

No, in all candour, it should be confessed, that, while many able hands have taken up the subject of cerebro-spinal pathology and much rich fruit has been the yield of patient and extensive research, it yet remains in an exceedingly obscure state.

The whole subject of cerebro-spinal localization rests on little more than vague speculation, and hence until a firmer basis is laid for it, it would be as well, though somewhat humiliating confession, not to designate it an established "doctrine."

T. H. M.

THIS, AT LEAST, THE DOCTOR CAN CLAIM AS AN ORIGINAL IDEA.

"Dr. John Ferguson, the new chairman of the High School Board has made a discovery. He hastens, therefore, to enlighten his misguided fellow-citizens. The system of co-education of the sexes at the Collegiate Institutes, is, according to the Doctor, all a mistake. Parents, too, have found it out, and, if the Doctor is correct in his statement, object to sending their daughters to the high schools to be educated with the boys. This information will come as a surprise to many people, who have fondly imagined that the present system was altogether satisfactory, and on the lines of progress. Dr. Ferguson, however, suggests that an institute be established, to be devoted wholly to the education of girls. Even if it is true that there are parents who prefer sending their daughters to private colleges, it is still true that there are a greater number who have no such scruples, and who believe that there are advantages in the system of mixed education as better fitting, both the boys and girls, for the battle of life, after they have left the colleges. So far there does not appear the slightest evidence, outside of Dr. Ferguson's own imagination, that there is any necessity whatever for the change which he suggests. It would most probably be an expensive experiment, and one which would be found to be entirely unappreciated by the general public."—*Editorial Evening News, Feb. 3rd.*

Items of Interest.

KEATS.

We all know something of Keats as a poet, but of his life as a medical student little has been said. We are indebted to the *British Medical Journal* for the following sketch:

"The history of Keat's medical education still needs elucidation. The main facts are sufficiently clear, but it has not yet been marked out in detail. He left Clarke's school at Enfield in 1810, when he had just completed his 15th year, and he was apprenticed at once to Thomas Hammond, a surgeon of Edmonton, where his mother was living after her separation from her second husband, William Rawlings. Keats was bound apprentice for the usual term of five years, and often revisited his old school, to which his master was the doctor. It is said that his fellow apprentices looked upon him as an idle, loafing fellow who was always writing poetry, and that after a time master and pupil quarrelled and the indentures were cancelled. This happened in the summer or autumn of 1814, and Keats entered as a student at the United Hospitals of Guy and St. Thomas, then located in the Borough. For the first winter and spring after leaving Edmonton he lodged alone at 8 Dean Street, Borough, and then for about a year, in company with some fellow students, over a tallow-chandler's shop in St. Thomas's Street. Thence he went, in the summer of 1816, to join his brothers in lodgings in the Poultry, over a passage leading to the Queen's Head Tavern. He was appointed dresser to Mr. Lucas, Surgeon to Guy's Hospital, March 3rd, 1816, and on July 25th, 1816, he was admitted a Licentiate of the Society of Apothecaries. The books of the Royal College of Surgeons make no mention of his name, so that he probably never attempted to obtain the diploma of that body. The statement that he quarrelled with his master Thomas Hammond is probably correct, for Keats was headstrong and pugnacious; but it is probably incorrect to assign the cancelling of his indentures to any such cause. Keats was merely following out the ordinary curriculum of a medical student of the time. The regulations of the Apothecaries' Society required attendance upon lectures as well as mere apprenticeship, and it was customary for a master to forgive his apprentice the latter part of his time to enable him to attend a general hospital. Thus Mr. Watson, Secretary to the Court of Examiners at the Apothecaries' Hall, states expressly in his evidence given before the Select Committee on Medical Education in 1834, that 'Although an apprentice is usually bound for five years, very few serve their masters for the full time;' and this is exactly the course taken by Keats. He was not a genuine practitioner of medicine, nor could he become one, for by nature he was otherwise inclined."

The world need not be sorry that he abandoned the scalpal to take up the pen to achieve such beauty out of words as expressed in his "Ode to Autumn," and the radiant musical charm shown in the "Ode to a Nightingale," and the "tenderness of passionate fancy" in the "Ode to Psyche," and the depth of feeling in that to "Melancholy." Neither his thoughts nor his heart were set on a medical career. While a student attending a medical lecture, he says:

"The other day, during the lecture, there came a sunbeam into the room, and with it a whole troop of creatures floating in the ray: and I was off with them to Oberon and fairyland." "My last operation," he once told Charles A. Brown, was the opening of a man's temporal artery. I did it with the utmost nicety, but, reflecting on what passed through my mind at the time, my dexterity seemed a miracle, and I never took up the lancet again."

"Whom the gods love die young"—In Rome, in the twenty-sixth year of his age, of consumption, he died. W. A. Y.

DUCHENNE.

FRANCE has done honor to herself by placing a monument to Duchenne in the Salpêtrière. This honor is due to one of the greatest clinicians and medical observers of this century. Duchenne made use of electricity for the purpose of studying nerve and muscle, and by so doing threw a new light upon the whole subject of neuropathology, which not only enabled him to demonstrate much previously undreamt of, but "enabled others to proceed along the paths which he indicated." Not only did he throw light upon pathological conditions, but added much to the knowledge of the physiology of movement, and action of the muscles of the body and face. A selection of his works has been translated by Dr. Poore.

W. A. Y.

DR. G. S. RYERSON, of Toronto, has retired from political life.

DR. J. M. COTTON, of Lambton Mills, has moved into Toronto, and has taken the house occupied by the late Dr. Strange, on Simcoe Street.

WE fear that, judging from the last editorial on The Victorian Order of Nurses, appearing in *The Canadian Medical Review*, the editor is inclined to change his former views on that subject. Surely he was not one of the number who DINED at Government House.

The Physician's Library.

Degeneration. By Max Nordau. Ninth edition. New York: Appleton & Co.
Genius and Degeneration. A Psychological Study. By Dr. Wm. Hirsch. Second edition. New York: Appleton & Co.

Prof. Max Nordau is an exceedingly versatile writer. Indeed he possesses in a marked degree the peculiar aptitude, and some say the peculiar faults which are supposed to be inseparable from the journalistic profession. Like Cicero, one of the unrecognized fathers of journalism, this German writer is said to be ready and willing to write a profound treatise upon any given philosophical subject at a moment's notice. It is of such a book, written by him, that I am here concerned.

It has been darkly pointed out that Herr Nordau has written plays. More recently he has certainly written short stories, and the inference is that no possible weight can be attached to the philosophical conceptions of a man who has sufficient imagination to have written plays and stories. Universities look at him askance. The medical profession do not take him up with alacrity. Meanwhile his "irregular" work is being read all over Europe and America with an interest which heretofore no "regular" volume of erudition, countenanced by the universities, has been able to inspire, and with the result moreover that that phase of psychiatry with which Prof. Nordau treats has been popularized and brought clearly before the minds of those who are most affected by the matter, I mean the general public.

Both the subject in general and the book in particular deserve fair treatment; and it is not fair to waive the book aside unread with the mere remark that the author is a melancholy pessimist, or a superficial scribbler straining after sensation. The book, as a matter of fact, has two sides upon which it may be viewed, a scientific and a literary side.

Morel, of Rouen, appeared with his treatise upon mental, moral and physical degeneration more than forty years age, and since that time there have not been wanting many succeeding works upon the subject, and notably the recent contributions of Lombroso. Coming in the footsteps of these men, and at this late day, Nordau cannot certainly be regarded in the light of a forerunner in a new province of science; nor has he in the work before us deduced any striking side issues, or to any extent amplified or deepened existing aspects of the subject. Indeed, it cannot even be claimed for him that he has summed up the main factors of the question as it stands to-day with anything like completeness, though he brings to bear a bewildering wealth of fact in support of his deductions.

Furthermore he has only loosely grasped the general idea of degeneration, as understood by Lombroso and his school, and more particularly as it refers to the intellect, and then, more as a *litterateur* than as a physician, has illustrated the steps of his reasoning from the world of letters and art familiar to the reader.

As a contribution to science therefore one must pause a little over this book, which is rather the work of a careful reader in these branches who has kept himself *en rapport* with his subject than of an original thinker who has brought forward as the result of careful and patient investigation, anything altogether new or palpably significant.

When viewed on the other hand from the standpoint of *belles lettres*, Prof. Nordau's work has a position altogether unique, and may be looked upon as one of the most powerful satires of the century. Whether its charm will be as lasting or not, its immediate effect is as powerful as was that of Cervantes' satire in an earlier day. Unlike the majority of German writers he is not dull or tedious, and every page of the large volume sparkles with brilliant persiflage and biting satire.

In somewhat the same spirit as Dante who, with a theological substructure for his poem, carefully grouped and classified his enemies in the most uncomfortable regions of hell, so Nordau, with a scientific basis of operations, arranges the objects of his displeasure (usually the morbid and decadent) in a scientific limbo quite as unenviable, and in this task he never loses the sympathy of the reader, for the reader himself has in all probability wished often in a vague way that the same offenders might be relagated to some such place.

The causes of degeneration are hurriedly set forth in the prolegomena. One would perhaps forgive a few pages of conscientious dulness here, for the principles of degeneration, only of late years beginning to be recognized as a definite law, are as important to the criminologist and alienist, and have done as much to illumine these branches of research as the principle of evolution (of which degeneration is merely the converse) has done for other fields of science. "Vice, crime and madness," said Féré with great truth, "are only distinguished from each other by social prejudice." And this can be said with equal point to-day. It is thus somewhat to be regretted that Herr Nordau was not more thorough and exhaustive in perhaps the most important portion of his treatise.

Poisons play a very important part in the production of degenerative changes, both narcotic and pathological—alcohol, opium and tobacco, tuberculosis and siphilis. The stress of life in large cities is another factor he mentions.

The second book deals with a clinical manifestation of degeneration which the author designates as mysticism, and the works of a large number of writers and artists are cited in proof of this theiry. Beaudelaire and the French school; Rosetti, Swinburne and pre-Raphaelites in England are criticised at some length. The morbid tendencies of literature and art are pointed out and explained from the standpoint of degeneration. Of a somewhat different metaphysical nature is Ego-mania, with which the author deals in the next book, where Ibsen and Tolstoi appear in very bad eminence; while in the fourth book Zola and realism are considered and briefly dismissed.

This is not a polemic in the field of rhetoric or the beaux arts, however. The literature and art of Europe are merely assumed by Nordau to indicate more or less clearly the intellectual state of a people for whom such a literature is produced and who are delighted in such art, just as a barometer indicates the atmospheric pressure.

The prognosis and therapeusis with which the book concludes are like the first book which deals with the etiology, a little weak perhaps, though in both instances this may be more due to the fact that the book is addressed particularly to the general reader rather than to the medical profession, in which case much technicality or theorizing would naturally be undesirable.

In a word, then, Prof. Max Nordau's Degeneration is in the strictest sense

a clinical study of the intellectual degeneration of the close of the century. The stigmata of physical degeneration are sometimes referred to, it is true, but it is not with physical degeneration that the book specially treats, nor yet with moral degeneration. With matters of social morals, indeed, he does not very much disturb himself or the reader; though in his trenchant examination of Ibsen he seems to be rather opposed than in favor of some of the innovations suggested, and he makes the following sane remark upon the much-vexed marriage question which indicates the masculine common-sense of the writer:

"A serious and healthy reformer will contend for the principle that marriage should acquire a moral and emotional import, and not retain a lying form. He will condemn the marriage for interest, a dowry or business marriage; he will brand as a crime the action of married couples who feel for some other human being a strong, true love, tested by time and struggle, and yet remain together in cowardly pseudo-union, deceiving and contaminating each other, instead of honorably separating and contracting genuine connections elsewhere: he will demand that marriage be based on reciprocal inclination, maintained by confidence, respect and gratitude, consolidated by consideration for the offspring; but he will guard himself from saying anything against marriage itself, this bulwark of the relations between the sexes afforded by definite permanent duty."

Nordau's work, possessed of unusual literary charm, and having been eagerly read by all classes, as the romance of the day might have been, it will for many years to come have a place of its own in literature as a brilliant philippic directed against some of the most dangerous tendencies of our own time. Perhaps it belongs rather to the domain of history than science. At all events, it is safe to say that with all its qualities it has, perhaps, more than any other book, stimulated thought among all classes in a direction that was imperative, and at a time when the need was greatest. Higher than this no book can aim. To this but few can ever succeed.

In many of the prosperous and even-lived, the sense of *bien être* is very well marked. The well fed and slow witted are generally optimistic. This large, influential and very respectable class are annoyed with anything that disturbs their turgid optimism. It is soothing to them to think that all the world is as healthy, and as well fed, and as comfortable, as they are, and any assertion to the contrary seems to them to be cruel and malignant, for it reminds them for a moment of conditions the very thought of which agitate reflexly the even peace of their quiet and contented minds.

And thus it happens that one frequently hears Cæsar Lombroso, of Turin, designated by these comfortable optimists as a wild hypochondriac, who has become half maddened by his evil researches in unlawful paths. His ideas are false and pessimistic. When Nordau appeared, it was easier to transfer the same epithets to him than to invent new ones.

At last Dr. William Hirsch arose as the champion of all quiet, comfortable and optimistic people, and in his book "Genius and Degeneration" essays to adjust all these unpleasant thoughts, dragged into indecent prominence by Lombroso and Nordau, and to put all that is unseemly out of sight again. Like a buxom maidservant in the disordered halls of respectability, he sets about his humble task, with even more enthusiasm than the menial referred to generally displays upon such a domestic occasion, but with somewhat less success. He has all the housewife's instinct for neatness, but the odds are great.

His book, which is a short one, is well written, but a little heavy on the whole, and perhaps a trifle superfluous, for after having read Lombroso and Nordeau, one will find it a very poor diversion to hold the heavy works in his hand ready for reference, while taking up passage after passage the well-meaning and slow-moving Hirsch, also a German, but with the proverbial dulness and prolixity of the race, singularly lacking in Nordau, triumphantly refutes in turn each assertion of the peccant authors in question. The prospect is not enticing, and on the whole reminds one of certain collegiate exercises, once but never again to be endured. Dr. Hirsch speaks harshly of Lombroso, and of the hundred times he mentions Nordau by name I do not think he speaks once in a tone of sincere affection. An optimist should not show rancour, but all should be peace and unctuous joy, such as swells in the simple heart of childhood at an evening party. But, perhaps, it will all sound different in German, from which both books have been translated.

Dr. Hirsch has brought a large fund of information to bear upon his subject, and one cannot fail to be interested in his volume in spite of the disadvantage which always attends such feats of authorship. Time and time alone will sift all. Meanwhile it is not too much to say that Professor Max Nordeau has performed a great service to his contemporaries, both lay and professional. E. H. Stafford.

The International Medical Annual, 1898. Sixteenth year, 8vo, cloth, about 700 pages. Copiously illustrated, including thirty-six full-page plates, twelve of which are finely colored. Price $3 net, post free. A work of reference for medical practitioners (alphabetically arranged). Combines the features of an annual retrospect with those of a medical encyclopædia. Each volume contains entirely new matter. New York: E. B. Treat & Co., Publishers, 241-243 W. 23rd St.

In announcing the sixteenth edition of the "Annual" we must again express our gratification at the cordial reception given to the last edition, which surpassed all previous records, and more than ever confirmed the estimate placed on this international work, as "the handiest, best arranged and best edited reference volume issued to the medical profession." The "Annual" for 1898 will contain many special articles of great interest, in addition to the regular summaries of the year's work in medicine and surgery, by thirty-eight editors, each contributing to the department with which he is specially identified. Among the special articles will be found one on "The Chief Pathogenic Bacteria in the Human Subject," with descriptions of their morphology and methods of microscopical examinations, by S. G. Shattock, F.R.C.S., the Pathological Curator of the Museum of the Royal College of Surgeons, London, illustrated by a series of ten finely colored plates; two contributions by Drs. Robert Jones, F.R.C.S., and A. H. Turby, M.S., on "The Obliteration of the Deformity in Pott's Disease," and on "Congenital Dislocation of the Hip," showing the technique in each case; both are freely illustrated, chiefly by reproductions from photographs. The work will be thoroughly illustrated by thirty-six full-page plates, twelve being colored, besides many illustrations, line and half-tone, incorporated in the text. We respectfully ask the continued patronage of the profession, that we may thus still further extend the "Annual's" circulation and usefulness. E. B. Treat & Co., New York.

The firm of W. B. Saunders & Co., of Philadelphia, are at present actively engaged in completing several very important works. Amongst them are Lehman's hand atlases, of which eight to ten will be published during the coming season. Each will contain a large number of colored plates, and will be placed on the market at a very low price. The American Text-Book of Genito-Urinary and Skin Diseases will be out at the end of the current month. This book will contain also several well executed illustrations specially made for the work. Van Valzah and Nisbet's "Diseases of the Stomach" will also be out this month, as also Keen's "Surgical Complications and Sequels of Typhoid Fever," and Dr. Chapin's "Compendium of Insanity." The 1898 edition of the "Year Book," by Dr. Geo. M. Gould, is now ready, and the publisher sends us word that there are for it a still larger number of orders than even for '97, which beat the record. The following also comprise works which are in active preparation :

An American Text-Book of Diseases of the Eye, Ear, Nose and Throat. Edited by G. E. de Schweinitz, M.D., Professor of Opthalmology in the Jefferson Medical College, Philadelphia ; and B. Alexander Randall, M.D., Professor of Diseases of the Ear in the University of Pennsylvania and in the Philadelphia Polyclinic.

An American Text-Book of Pathology. Edited by John Guiteras, M.D., Professor of General Pathology and of Morbid Anatomy in the University of Pennsylvania : and David Riesman, M.D., Demonstrator of Pathological Histology in the University of Pennsylvania.

An American Text-Book of Legal Medicine and Toxicology. Edited by Frederick Peterson, M.D., Clinical Professor of Mental Diseases in the Woman's Medical College, New York ; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York : and Walter S. Haines, M.D., Professor of Chemistry, Pharmacy and Toxicology in Rush Medical College, Chicago, Illinois.

Stengel's Pathology. A Manual of Pathology. By Alfred Stengel, M.D., Instructor in Clinical Medicine, University of Pennsylvania ; Physician to the Philadelphia Hospital ; Professor of Clinical Medicine, Woman's Medical College ; Physician to the Children's Hospital ; late Pathologist to the German Hospital. Philadelphia, etc.

Church and Peterson's Nervous and Mental Diseases. Nervous and Mental Diseases. By Archibald Church, M.D., Professor of Mental Diseases and Medical Jurisprudence in the North-western University Medical School, Chicago ; and Frederick Peterson, M.D , Clinical Professor of Mental Diseases in the Woman's Medical College, New York ; Chief of Clinic, Nervous Department, College of Physicians and Surgeons, New York.

Heisler's Embryology. A Text-Book of Embryology. By John C. Heisler, M.D., Professor of Anatomy in the Medico-Chirurgical College, Philadelphia.

Kyle on the Nose and Throat. Diseases of the Nose and Throat. By D. Braden Kyle, M.D., Chief Laryngologist to St. Agnes' Hospital ; Bacteriologist to the Orthopedic Hospital and Infirmary for Nervous Diseases ; Instructor in Clinical Microscopy and Assistant Demonstrator of Pathology, Jefferson Medical College, Philadelphia.

Hirst's Obstetrics. A Text-Book of Obstetrics. By Barton Cooke Hirst, M.D , Professor of Obstetrics in the University of Pennsylvania.

West's Nursing. An American Text-Book of Nursing. By American Teachers. Edited by Roberta M. West, late Superintendent of Nurses in the Hospital of the University of Pennsylvania.

[PUBLISHERS' DEPARTMENT.]

SERUM THERAPY WITH REPORT OF CASES.

BY JOHN M. ALLEN, A.M., M.D.

THE announcement of the subject matter of my paper carries with it the idea that I would cover the field of serum therapy, but I shall confine myself to the use of antitoxic serum and its effects in diphtheria and phthisis pulmonalis.

The curative effects of antitoxic serum in diphtheria is now so well established that there is no need of argument or detailed report of cases to establish its benefits in this disease to the medical profession. Hence I give only a summary of my cases. I have treated fifty-three cases of diphtheria without the loss by death of a single case. Forty of these cases were treated with serum only, cleanliness and good food. The remainder had had other treatment before I saw them. The complications which occurred among these cases were as follows: Hoarseness, seven: five of aphonia: two of toxemia: one of broncho-pneumonia, resulting from the extention of the membrane into the bronchi: one case of paralysis. No operative interference was needed. In none of these cases of complication did I see them before the third day. All of the cases which I saw within the first twenty-four hours recovered without complication. Hence it is my opinion that cases seen thus early rarely have any complications.

My mode of administering the serum is to begin with a full dose the first day; two-thirds the next day: one-half the next day, in mild cases. If the case is of malignant variety, I repeat full doses of serum every ten hours until improvement begins. Then lessen the dose, and give from two to four more. This repeated administration of the serum is based on the fact that the bacilli may be found in the fauces for several weeks after the membrane is thrown off.

It does occasionally happen that the larynx has been attacked a week or ten days after the membrane disappears from the fauces. But where the remedy is continued as directed above, the bacilli are either destroyed or are so attenuated as to lose their vital energy. It is my opinion that the serum has immunizing properties, because I injected it into seven children who were dangerously exposed to the disease. None of them had it. The dose used was full size.

I have treated four cases of phthisis pulmonalis with Paquin's antitoxic tuberculosis serum.

Case 1.—June, 1894, Mrs. D., age 32, mother of one child, presented herself for treatment and I found her in the following condition: Hereditary tendency to phthisis, had gradually lost flesh and strength until reduced from 115 pounds to 75 pounds, in a

period of about twelve months. Severe cough and expectoration for about last seven months. Sputum had been examined about four months before I saw her and found to contain bacilli tuberculosis. At the time of my first visit she stated that she had had hectic fever and colliquative sweats daily for some time. Temperature 103.5, respiration 37, pulse 98. Entire loss of appetite. Sputum under microscopic examination found to contain large quantity of bacilli. Auscultation and percussion located two spots in upper portion of right lung that were impervious to air. There was no evidence that the tissues had broken down.

I began the treatment with Paquin's antitoxic tuberculosis serum, giving ten drops by hypodermic injection, increasing the dose within three days to a dram, which was continued daily for 120 days. After which for another 120 days it was given every other day. After this it was given three or four times a week for the remainder of the year. This treatment was supplemented by the following prescriptions:

℞	Creosote	xxiv gtt.	1·30
	Tr. cinnamom	℥ iv	16·00
	Glycerin	℥ xx	80·00

Sig. Teaspoonful, gradually increased to five teaspoonfuls, three times daily before eating.

℞	Oil eucalyptus	℥ i	4·00
	Oil cassia	℥ i	4·00
	Creosote	℥ i	4·00
	Oil tar	℥ i	4·00
	Liq. vaselin q.s.	℥ iv	128·00

Sig. Inhale in nebulizer frequently.

By the end of the third week her appetite began to return, hectic fever ceased, cough and expectoration gradually ceased and in less than six months she weighed 120 pounds. From the end of third month the bacilli began to be attenuated and continued to decrease in size and number until the end of the fifteenth month when none could be found in the sputum nor has there been any since. The points of dulness in the lungs have greatly decreased in size, but have not entirely disappeared.

Case 2.—July, 1895. Unmarried lady, age 26: hereditary tendency to phthisis. Had been an invalid for five years, visiting many climates in search of health. When presented to me I found her in the following conditions. Extreme emaciation, loss of appetite, hectic fever, chronic diarrhœa for the last fifteen months: pulse 110, evening temperature 103.5, respirations 45; auscultation and percussion revealed a large abscess in apex of right lung. Mouth covered with aphthæ. Sputum loaded with bacilli. My prognosis was that she would not live sixty days. She was placed on the same course of treatment as Case 1. At the end of four

weeks hectic fever had ceased. Her appetite had returned. Diarrhœa very much better, and entirely ceased before the sixth week. She steadily improved until the end of the fifth month, when a thrombus formed in the left femoral vein, from which she died thirty days later.

Case 3.—December, 1895. There had existed for five years a tubercular deposit in the apex of the right lung. Childbirth caused it to rapidly break down. Microscopic examination showed tubercular bacilli. Began treatment and continued irregularly two months. This case was refractory to treatment from the beginning: therefore was not benefited and died at the end of five months.

Case 4.—March, 1896. Male, age 22, of good proportions. Had hemorrhages several times during the preceding year. Progressive emaciation: weight 130 pounds, appetite not good. Evening temperature 101.5: respiration 34. Auscultation and percussion indicated tubercular deposits at two points of upper right lung. Microscopic examination of sputum showed an abundance of bacilli. Began treatment as above, and within three weeks patient began to improve, which continued without interruption until he was compelled to leave me, September, 1896. At this time temperature normal, respirations 22, weight 150, appetite good. Sputum contained attenuated bacilli. When last heard from he was at work on a ranch in Colorado.

In an analysis of the above cases it is fair to conclude that if this treatment was begun before the structures began to break down, it would be certainly beneficial and possibly curative. After abcesses have formed it is beneficial but probably not curative. Yet if the disease is not too far advanced in the second stage, many could be cured if supplemented by climate influences.

In estimating the curative value of the remedies used, the inhalation of germicidal remedies is certainly in the right direction; but alone they are useless. The creosote has for years had some reputation as a cure for phthisis. That it is beneficial, there is no question; but it is not curative, for the reason that it practically has no effect on the bacilli. This I have many times demonstrated by microscopic inspection of sputa in patients in my clinic at the University Medical College of Kansas City, who had taken large quantities of it. Creosote is beneficial in two ways. 1. It reduces the toxins in the blood, thereby lessening or preventing hectic fevers and colliquative sweats. 2. In a very large percentage of cases of phthisis pulmonalis next to the lungs the most frequent structure involved is the duodenum with chronic inflammation and ulceration. This interrupts intestinal digestion and assimilation, also often by reflex irritation interrupts stomach digestion. Hence is the progressive emaciation in phthisis. Creosote stands at the head of the list as a curative remedy in this pathologic condition, thereby increasing the digestive and assimilative force of the person.

With these facts before me I must conclude that the active force in affecting the bacilli was the serum. The next question is as to the

effects of the serum after entering the blood. On this point many theories have been advanced.

I abstract the following from an address delivered by Dr. William Carter, of Philadelphia, before the Pan-American Medical Congress, 1893. "That blood serum is a powerful and active therapeutic force is just now beginning to be recognized. Landois discovered more than twenty years ago that the mixing of the blood of different animals resulted in the destruction of red corpuscles." Recently Dr. Carter by experiment has established the globucidal property of blood serum beyond question. He has further demonstrated that the serum of some animals are destructive to the life of others. Mettal and Buckner have shown that the blood serum of certain animals, which are refractive to certain diseases, is highly destructive to the bacteria that caused the disease. This shows that there are other forces in the blood which are destructive to bacteria, besides that of Metchnikoff's theory of phagocytosis. It is also well established that animals, naturally susceptible to certain diseases, can be immuned to those diseases by injection of the blood serum of animals either naturally immune or rendered so artificially. That the injection of blood serum of immune animals after infection has taken place will destroy it and terminate this disease is true.

That serum has globucidal and germicidal properties is well established. Its globucidal effects can be well understood, but whether its germicidal effect be by actual contact or by destroying the entity upon which the germ lives and develops is doubtful.

In view of the fact that the life and development of the germ depends as much on its environments as that of the human family, and further that its life and development ceases as soon as the pabulum upon which it lives is consumed or destroyed, we deduct the idea that serum destroys this pabulum, thereby terminating the life of the germ. This is proven by the natural history of all the contagious diseases, first by their being self-limited, secondly by the fact that one attack in the majority of them immunes against a second, no matter how badly we may be exposed to the contagion. Indeed inoculation will not produce the disease. For no other reason than the entity upon which the germ lives and develops has been eradicated by previous attack. When serum is injected into the blood to immunize the person, it is done before there exists any germs in the blood: therefore, not for its germicidal effect. The only phenomena observed is a slight reaction attended with elevation of temperature. Hence immunity is nothing more than the eradication of this entity upon which this germ lives and develops. I give as an example, smallpox. After the person has been immuned from the disease no difference can be detected by the microscope or otherwise between the immune person from smallpox and the one who has not been. The blood, the secretion and exhalation are exactly alike. I think this holds good in all germ contagious diseases. We see this exemplified in the following

process of fermentation, acetous, venous, alcoholic. The bacterial ferment lives and develops as long as the fluid element contains the essentials necessary for its life, after which it dies and no further germ life can exist in this fluid. The same is true of all culture media.

Hence it is my opinion that the curative effect of serum is indirectly germicidal by destroying an entity, which is necessary for the life and development of the bacilli. This is manifested in the fact that after its use the bacilli becomes attenuated: and from the further fact that many of us do not possess this entity. Hence the bacilli can not develop in our structures.—*Jour. Am. Med. Assn.*

THE ARTIFICIAL FEEDING OF INFANTS.

BY EDWARD AMES ROBINSON, M.D., PHILADELPHIA, PA.

THE subject of infantile feeding and nourishment is one that commands the attention and study of all physicians, by virtue of its great importance and direct bearing on the survival of infantile life and health.

Every physician when brought into contact for the first time with a case of an infant to be artificially fed cannot but feel his incompetency to satisfactorily manage the case. Therefore would I urge the indefatigable study of infant feeding, especially as it is so intricate in its many details, requiring much patient study and experimentation to master.

In the first instance every case where artificial feeding is to be employed should be indvidualized and studied as such. There is no class of cases where empirical prescribing is more harmful and positive detriment to the patient is sure to result.

One food will meet all that is desired in a certain case, but in another case the same food may cause gastro-intestinal disturbances, which cannot be controlled until the food is changed.

How often have we all seen an infant thrive and give every appearance of robust health after being fed on a diet that has been entirely assimilated, and on the other hand, we have seen another infant that had been fed on the same food lose flesh and grow marasmic from mal-assimilation. The paradox cannot be attributed entirely to defectiveness in the constituents of the food, but to the powerlessness of the gastro-intestinal secretions to act physiologically and appropriate the various ingredients of the food as a whole, to the nutrition and development of the body. It then became our imperative duty to study each case alone and adopt for its use the food that *in toto* will meet the exigencies in the individualized case.

In considering the many factors that are concerned in the nourishment of an infant, one of the most important to keep in

mind is the capacity of the infant's stomach. Of this fact very few who have the care of infants have any correct idea.

You will find that the prevailing notion is to let an infant take as much food at each feeding as it wants. The difficulty in overcoming this erroneous and pernicious custom deters many physicians from giving exact instructions to mothers and nurses as to the amount of food to be given at each feeding. But I hold that it is the duty of every physician who really has the interest of his patient that he should have to specifically state to mothers and nurses the exact amount to be given at each feeding, and to intelligently explain the limit of capacity of the infant's stomach.

If this is made a rule of practice and persistently adhered to, you will find that the vomiting of the excess of food, which is so common, will cease, and the infant will be spared the discomfort and oftentimes the suffering of an over-distended stomach. And also the mother will be saved the unnecessary labor of frequent changing of clothing and washing of clothes.

Another prolific source of trouble in the feeding of infants is the too frequent giving of food.

And here again you will have to break down an old prevailing notion that when an infant is irritable and sleepless that it must be given some food.

The fallacious idea is very firmly fixed in the minds of the people in general, and it will require a strong purpose on the part of the attendant to insist that his orders in regard to feeding are strictly observed by those in charge of the infant.

I am convinced, beyond doubt and without prejudice, that more infants cry because the limit of capacity of their stomach has been over-reached than from any other single cause.

Try to teach the mother to closely watch the baby for symptoms, which will be the expression of any abnormal condition that may exist, rather than to accept that simply a cry is the desire for food. If you will take the trouble to reason with an intelligent and interested mother in regard to the management of her offspring, she will prove an apt scholar and will greatly assist you in discovering diseased conditions, when they really exist, and you will be wonderfully aided in reaching a direct diagnosis and administering proper treatment.

The selection of a suitable food from among the large number of artificial foods is oftentimes associated with many difficulties.

To find food that contains in the proper proportions the ingredients which are necessary to sustain the normal nutrition of the body and which at the same time is palatable and easily digested is not so easy as at first thought might be supposed.

If we would want to use cow's milk we have the constant fear that bacteria which permeate the atmosphere, and also are found on the hands of those who handle the milk, will contaminate the fluid and thereby give rise to intestinal disorders in the infant Of course it can be sterilized and rendered thereby entirely free from

bacteria, but the necessary labor to the mother and the process of sterilization, being somewhat complicated, it cannot be entrusted to the ordinary mother or nurse; especially true will this be found among the poor.

But, on the other hand, think of the simplicity of the preparation for feeding of the commercial food. Any mother or nurse, be she ever so inexperienced, can make in a few minutes a food absolutely free from contamination of any kind, sufficient for one feeding, the temperature of the proper degree and containing all the essential elements of nutrition.

I contend that inestimable advantage is secured to the infant by an artificial food closely approaching in its constituents mother's milk.

With cow's milk the proportion of fat, proteids and sugar are variable, and of necessity, must continue so because of the various sources of milk supply.

But in a good artificial food we can have invariable proportions of each ingredient at each feeding, equable temperature and free from chemical changes.

Early this summer, in the treatment of several cases of gastro-enteric catarrah, and later in a large number of cases of cholera infantum and entero colitis, I employed "Eskay's Albumenized Food" exclusively.

My reason for using this special preparation in preference to others was the results obtained were so uniformly satisfactory that I was compelled to believe that an almost perfect substitute for mother's milk has been found.

In all other cases of the character previously mentioned there was not one instance in which this food was rejected by the stomach.

A PROMINENT MEMBER OF THE MEDICAL PROFESSION

"Then the generous Hiawatha
Led the strangers to his wigwam,
Seated them on skins of bison,
Seated them on skins of ermine.

. . . . . .

And the calumet, the peace-pipe,
Filled and lighted for their smoking."

DR. ORONHYATEKHA was born at the Six Nations Reservation, near Brantford, Ont., in 1841. His education was begun in an Industrial school established by the New England Company for the training of young Indians, and continued at the Wesleyan Academy, at Wilbraham, Mass., Kenyon College, Ohio, Toronto University and at Oxford University, England.

Even as early as Kenyon College days we find in the character of Dr. Oronhyatekha, evidences of that shrewdness, boldness and

ability as an organizer, that has marked his entire course. Apropos of these characteristics is a story coming from his college associates to the effect that, finding his limited exchequer nearly depleted at the end of one term and the chances for another consequently at the vanishing point, he organized an Indian show. With one "really" Indian and several of the most raw-boned white men he could induce to receive instructions in war dances, songs, and blood-curdling war whoops, and be painted and feather-trimmed to suit the requirements of the show, he put in the vacation "starring"

ORONHYATEKHA, M.D.

through the country, with the result that the next session found the young showman, in the language of the street, with "money to burn."

It was while Oronhyatekha was a student at Kenyon College that the Prince of Wales made his memorable visit to Canada. The Chiefs of the Six Nations deputized him to deliver an address to the son of the "Great Mother," as they called the Queen. The impression the young Indian made upon the Prince and the royal party was so favorable that he was invited to continue his studies at Oxford, England, under the care of Sir Henry Acland, Bart. Regius Professor of Medicine, and out of this relation of teacher and pupil sprung a friendship that will likely last to the end of life.

For some years Dr. Oronhyatekha practised medicine in London, and elsewhere in Ont. However, a broader field of activity soon

claimed his splendid administrative ability and practical methods —we refer to the organization of the Independent Order of Foresters, with which his name has been indelibly inscribed.

Oronhyatekha, as he prefers to be called, is a familiar figure to all, especially in Toronto, at present his headquarters. He moves among us a noble and inspiring tribute to the advantages of liberal education, and a connecting link between the present and the past in the history of Canada, inasmuch as he blends in his interesting personality the physical perfection of the race whose shelter was the grand forest primeval of our land, with the culture of the nineteenth century man of affairs.

TESTS FOR DIPHTHERIA ANTITOXIN.

THE tests employed for the estimation of the potency of antitoxic serum are only of value when the toxin employed for the investigation is the same that was employed for the inoculation of animals destined to furnish the antitoxic serum. Ignorance of this fact has prevailed until very recently, and it may be said that there are but few members of the profession that are as yet aware of it. A number of months ago tests of various makes of antitoxin were made in a laboratory, and one of these was found, according to the reporters, to be below the standard claimed.

We can most readily see the worthlessness of the results arrived at when we consider what occurred to Dr. C. T. McClintock, of Detroit (*Med. News*, October 30th, 1897.) We quote his own words: "It has been recognized for some time by every competent observer that our tests are very unsatisfactory and unreliable. One bacteriologist would report that a given serum contained only a half or a third the number of units which another had found. Several months ago I had a bottle of serum divided into four equal parts. One of them was sent to a bacteriologist at Ann Harbor, another to Detroit, another to Philadelphia, and the fourth to New York, with requests for an accurate test of the number of antitoxic units in each cubic centimetre. Every one of the bacteriologists to whom this serum was sent has had large experience in testing antitoxin. The reports made were as follows: (*a*) 150 units per c.c.; (*b*) 175 units per c.c.; (*c*) 100 units per c.c.; (*d*) 250 units per c.c." Dr. McClintock goes on to say that "there is nothing strange in such variations, if we remember that the foundation of the test is the strength of the toxin, or in other words, the lethal dose of a poison." Further on we find that "at the Berlin control station they have had the same experience, and finally concluded that the test was wholly unsatisfactory and abandoned it, or rather modified it."

It has also been found that serums of a high potency very rapidly lose their antitoxic power, and at the Behring Laboratory

they have ceased to place on the market any that contains more than 250 units per cubic centimetre.

There is another factor of importance, however, which McClintock does not mention, and which is a source of fallacy in the application of any test upon animals It consists in the fact that there are animals which, like men, show idiosyncrasies in regard to poisons of any nature, that an animal is frequently found which will show an astonishing power of resistance, or an extreme sensitiveness. If such an animal is employed for a test it will of necessity produce an erroneous conclusion. These idiosyncrasies make it absolutely impossible, with living animal reagents, to arrive at mathematical conclusions.

Again, a third factor of interest exists. This consists in the fact that, according to Madsen, of Norway (*Uni. Med. Jour.*, April, 1897), and others, "it is not easy to secure a constant production of the diphtheria toxin; although he used a very virulent species, the cultures in bouillon gave very different results, to variations occurring without any known reason." He also found that when toxins from different laboratories are employed to test the serum, the result is different, even when the lethal minimum dose of the toxin is accurately determined. A serum, which is calculated in one laboratory to be of 100 units, may in another laboratory, where the toxin is different, only reach the force of 30 units.

More could be said, but it appears unnecessary, to prove that the tests upon which certain makers pride themselves, have absolutely no character of reliability.

It has lately been stated that in New York the State health authorities would soon begin to test all the makes of antitoxin found in the market, at regular intervals. We welcome the idea, which is a praiseworthy one, providing the tests are so conducted as to eliminate all possible source of error. The only way in which this can be accomplished, it would seem, is the following: The State Health Board should furnish its own toxin to the makers, and thus enable them to test their product with it before sending it upon the market. And here we may add that each test should be conducted upon more than one animal, to save against error by idiosyncrasy.—*N. Y. Pasteur Bulletin for December, 1897.*

The first issue of the *Philadelphia Medical Journal*, under the able editorship of Dr. Geo. M. Gould, came to hand a month ago. It is quite unnecessary to add anything to the many words of praise already accorded this publication further than to say that it must of necessity have a very bright future before it, the material being of the very best, well illustrated, and the typography most attractive. We welcome it as one of our most appreciated exchanges.

THE LATE DR. O'DWYER,

OF INTUBATION FAME.

The Canadian Journal of Medicine and Surgery

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Original Contributions.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

SOME CASES OF COLORED VISION.

BY JAMES MACCALLUM, B.A., M.D.,

Oculist and Aurist to Victoria Hospital for Sick Children: Assistant Physician to Toronto General Hospital; Professor of Therapeutics in the University of Toronto.

IN medical literature the cases of colored vision most frequently described are the toxic ones: xanthopsia, or yellow vision, due to jaundice or to the ingestion of santonin, picric acid, or chromic acid: erythropsia, or red vision, from the seeds of hyoscyamus niger, or from the mescal button.

The colored vision of jaundice, and that of santonin and picric acid may fairly be described as mechanical, inasmuch as the humors of the eye are discolored, and objects necessarily take on the hue of the straining.

Red vision may be of much graver import, as in the following case:

W. P., aged 20. In July, 1896, objects appeared to him to be of a red color. This erythropsia disappeared at the end of September, but reappeared at Christmas. Redness more marked to the left eye. When seen by me in February, 1897, objects still appeared red. Ophthalmoscopic examination showed hæmorrhage into the vitreous, so great as to prevent the fundus being seen. Later on he had another hæmorrhage, after which, by oblique illumination, blood was seen just behind the iris, and the retina was detached. Vision, hand reflex. Physical examination revealed organic heart disease of rheumatic origin.

How necessary an ophthalmoscopic examination, and how grave the prognosis may be in cases of colored vision is evident from this case.

Erythropsia may then occur mechanically from hæmorrhage into the vitreous, or—but less often—from hæmorrhage into the yellow spot. The red vision may change into green as the extravasated blood undergoes its usual color changes.

Colored vision may be central, as in epilepsy. Gowers says that the visual aura is twice as frequent as all the other special sense auræ together. Red and blue are the colors most often seen, and both are never absent. When the aura is followed by a true epileptic attack the diagnosis would not present any difficulty.

Although every physician knows that attacks of petit mal may consist only of symptoms which constitute the aura of major attacks, yet one could scarcely be blamed for failing to recognize that an attack of red or blue vision with obscuration of sight was epileptic in its nature. Its temporary duration and careful investigation into the history, family and personal, would be the chief guides.

The colored vision which precedes a fainting attack presents no difficulty of diagnosis.

I owe to my friend Dr. J. D. Courtenay, of Ottawa, the account of another case of central colored vision of somewhat different nature. An old man of sixty who had just escaped delirium tremens, complained for nearly two weeks that all objects appeared to him to be of a bright pink color. Pupils were normal, and there were no fundus changes of any kind As the exhaustion due to his debauch wore off the colored vision gradually faded away.

The majority of cases of colored vision are peripheral in origin. Patients who have had the lens removed because of cataract, or who have had their pupil enlarged by an iridectomy, often complain that objects appear to them to be red.

The lens normally absorbs chiefly the ultra violet rays, so that the light impinging upon the retina is poor in such rays. If, however, the lens has been extracted as for cataract, the ultra violet rays reach the retina, and produce subjective color sensations and a sense of dazzling. The red vision may occur but once and last only a few minutes, or recur at intervals.

The loss of the lens or of a portion of the iris is not the sole factor in the production of peripheral colored vision, for it may occur when both lens and iris are intact, as in the following cases:

R. S., Jewess, 10 years. The glare of the snow makes objects appear red, the sun has the same effect. The blackboard at school sometimes looks to be of a kind of pink, and sometimes becomes green after having been pink. If she "looks on anything too much" she sees it green and then yellow. When asked what object had appeared thus, she named her slate. Sometimes the objects looked blue, but not often. Fundus normal. Vision R. $\frac{6}{24}$. L. $\frac{6}{9}$ partly. She was put on atropine drops for a week prior to refraction. At the end of that time she said that objects did not present the colored appearance so much as before. She was told to continue the drops as she was not thoroughly under the mydriatic. She disappeared and has not since returned to the clinic.

Pupils 5mm. in diameter; fundus normal; anæmic and poorly fed.

G. Q., male, 14 years, of French descent. A tall, overgrown, anæmic boy. Has just won the bronze medal in the public school. He complains that his eyes pain him when he looks at objects. Objects at first appear to be red, but then change to green. This color phenomenon occurs only when he looks closely at objects. If he looks away from and back again at the object, it is then normal in color. The change of color is most marked with black objects.

During the summer if he looked at the sun and then at the grass it was no longer green but red; if he did not look at the sun the grass appeared of its true color.

If he looked at a schoolmate who was some distance away, he appeared red and then green, but only if the light was very bright. A red shadow often came over the blackboard. The color changes were seen by either eye alone or by both together. When the snow is on the ground, although less than in the bright summer light, these color phenomena are present.

Fundus normal, pupils large, but diameter not noted. Although objects appeared colored in this way he was able to recognize their true colors.

Refraction under atropine R. +1.75 Ds. = $\frac{6}{6}$. L. +2.25 Ds. = $\frac{6}{6}$.

A week later, after accommodation had returned to some extent, but while the pupil was still 8mm. in diameter, he reported that the colored vision had not been observed for some time.

This patient was under observation during the Christmas holidays so that he was having mental rest at least.

Nettleship is one of the few authorities to make any reference to this phenomenon of colored vision. He says: "Overworked, anxious, neurotic children sometimes complain that after reading or sewing 'everything turns red,' or 'red and blue.' I have not heard green or yellow mentioned."

One is rather surprised that such should have been Nettleship's experience, for green is the complementary color of red, and yellow a mixture of red and green, and hence we would expect the patient to see objects red or pink and then green and yellow, rather than red and blue.

In no case of colored vision, unless the hæmorrhagic or, perhaps, the epileptic, is there impairment of vision. The actual hue of the objects is recognized through the red shimmer, except in the case of green, which is blotted out or appears grey.

In the production of colored vision a dilated pupil is an important factor, inasmuch as it permits of an unusual amount of light reaching the retina. The light must be not only unusual in amount, but also in intensity.

If a patient whose pupil has been dilated by a mydriatic, looks at a bright light, and then into a dark room, he sees an image of the light surrounded by a border of pink, blue and other colors. In the production of these familiar "after images" we have the same two factors, a dilated pupil and a dazzling light.

Could one add the element of nerve fatigue, be it peripheral or central, one might produce at will colored vision, for in all such cases one may discover the three factors, a dilated pupil, a dazzling by strong light, fatigue or hyperæsthesia of the retina, or fatigue of the central nervous system.

13 Bloor Street West, Toronto.

THE SYSTEMATIC AND CONTINUOUS USE OF ART IN ALL CASES AND STAGES OF LABOR.

BY JOHN HUNTER, M.D., REDLANDS, CALIFORNIA.

No other event in life calls forth more anxiety or is attended with greater suffering than the act of childbirth. It surpasses all else in interest to the individual, family, society, nation and the world. Had Noah perished in his transit from intra to extra-uterine life the history of our race could have been written on a postal card. One would naturally suppose, then, that the advent of a human being with such potentialities would be an inspiration sufficient to enlist the best of his art and the closest attention on the part of the obstetrician. However, if any one doing a fair obstetric practice asks his patients how they have been treated, will he not get some such answer as the following: "The doctor made an examination and if I were getting along pretty fast he stayed, but if not he would go and come." "What relief did he try to render?" "None at all." This indolent and cruel routine into which midwifery practice has so universally fallen, is aptly illustrated by such cases as the following: The patient was afflicted with biliary trouble, and at times suffered a good deal of pain during expulsion of the calculi. During these attacks her physician was all attention and fairly exhausted his resources in trying to secure relief, but during her long and intensely painful labor cases the same physician would simply come and go without giving a single thought to her sufferings. When appealed to for some measure of the relief he secured during the passage of the gall-stones, his illogical and brutally inhuman reply was: "It isn't good to meddle with labor cases. Better leave them to nature." A moment's reflection would have convinced him that the expulsion of the calculi was as purely a physical process as that of the fœtus. If it were his duty to make the one as painless a process as possible, why not the other? The experience of our best obstetrical practitioners and teachers make the fact an indisputable one, that there is less danger to the fœtus, and of *post-partem* hemorrhage or other injury to the mother, when her sufferings are mitigated and her normal powers retained, than when allowed to be driven to distraction by pain and completely exhausted from want of rest. Of course, we daily run across men who seem to cherish a sort of superstitious dread of some occult danger lurking in all applications of art in obstetric practice. In fact, what pagan delusion has been taught so persistently or followed with such fanatical zeal as the bug-a-boo, "meddlesome midwifery," or "leaving to nature." How oblivious all such delusions are to the fact that true art never meddles with the functions of nature—for nature neither tolerates meddling or

imitation (*vide* Second Commandment)—but lends all her resources to art. Microscope or telescope, bicycle or lightning express does not meddle with the functions of eye or limbs, and yet increases their power a thousand-fold. This whole valley of San Bernardino when left to nature was utterly barren and worthless. Art tunnelled into the mountains, tapped an abundant supply of water and now the soil is unexcelled in fertility. Why, then, since it is the rule for nature to yield her resources to art, should the obstetrician be so stupid and incredulous about using all that his art can render in relieving the sufferings, and when necessary, limiting the duration of labor cases. Acting on this rule, the systematic and continuous application of art in all obstetric practice would make our procedure consistent with our methods in medical and surgical work, and give an incalculable amount of relief from the anxiety that precedes, and the intense agony incident to, the act of parturition. It would also act as a powerful stimulus in augmenting obstetric skill. The present antiquated and disreputable routine would give place to some such standard as the following—containing, of course, such modifications as knowledge and experience would suggest:

1. The obstetrician should possess the fullest possible control over his mental faculties, and a thorough knowledge of the resources of his art. Thousands of lives have been sacrificed directly through the absence of one or both of these.

2. The art of making a thoroughly aseptic, scientific, efficient and painless examination. Scores of ladies refuse the services of many an otherwise reputable man on account of his brutal methods of making an examination. The obstetric fingers can acquire all the sensitiveness, pliancy and delicacy of touch that the fingers of the pianist have. Any infliction of pain is evidence of ignorance or culpability or both.

3. The most reliable aseptic precautions and conditions most religiously carried out during whole puerperal period. Praying for God-speed to the time when an inquest will be held in every case of death during this period. The aseptically righteous men will have nothing to fear—septic sinners will deserve the penitentiary.

4. Surroundings—These should be made as cheerful and comfortable as possible. A thousand and one things will suggest themselves to the observant eye.

5. Relief from unnecessary pain. Some patients can endure what is intolerable to others. The unbearable pain can be mitigated by mental diversion, change of position or anodynes.

6. The earliest possible resort to the use of anæsthetics and forceps consistent with the most absolute safety to both mother and child. Now, I am well aware, from a pretty extensive reading of obstetric literature, and from what I have often heard some strong and reliable teachers, as Adam Wright, Machell and Macdonald, say at meetings of Toronto Medical Society, that the last proposition will scarcely be allowed to go unchallenged. However, adopting

one of Emerson's maxims, viz., "Stand by your own spontaneous convictions with good-natured inflexibility, the more so when all the cry of voices is against you." I do not hesitate to affirm, from pretty close observation of what I have seen others do, and from what I have been able to do in a fairly large practice extending over a quarter of a century, that instruments can be used with the greatest possible freedom without fear of inflicting either present or remote injury on mother or child. My excuse for introducing a personal reminiscence is the profound impression I secured when attending the second labor case in my student days at the old institution, I think, on Bay Street. A young girl was in labor from Thursday until Sunday morning. She almost battered her brains out in her agony before relief was invoked. Dr. Temple was called—applied forceps and in a few minutes delivered the completely exhausted and demented creature of a healthy child. I at once recognized the absolute necessity of acquiring the art of using forceps, but soon found it was impossible to learn it from books or lectures, and our teachers of that date gave no opportunity of acquiring it from experiment. However, just as soon as I got my license, I quietly ignored all the objections and restrictions I had been taught, and availed myself of every opportunity of using the forceps. About the only cases missed were those where the birth had taken place before my arrival. I always regretted missing these. Now, without presuming to have acquired a particle more skill than any young man who tries can most safely and easily obtain, I soon had a record of a hundred successful cases. I had the privilege of watching nearly every mother and child for seven years. Not one of them suffered any ill effect; but I am fully satisfied that the experience and confidence thus early acquired have saved the lives of scores of patients and children.

The following deductions may be briefly summarized, especially for the benefit of the host of youthful medicos soon to be launched on the professional sea:

1. Acquire by wide reading and close observation full knowledge of the resources of obstetric art, and by persistent practice the most complete mental control so as to be able under all circumstances to calmly and intelligently use your knowledge and resources.

2. Cultivate early and most assiduously how to make an aseptic, scientific, efficient and painless examination.

3. Consider most carefully every factor that can add to the peace of mind, relief of suffering and prompt delivery of your patient.

4. Whilst always exercising the most intelligent precautions against every possible danger to either mother or child, avail yourself of every opportunity of acquiring the utmost dexterity and confidence in the use of forceps, for in many abnormal cases two lives are absolutely dependent upon this skill. The forceps should

be to the obstetrician what the bicycle is to the expert rider, sensitive and responsive to the most delicate touch.

5. Never leave a case to nature, but be always ready to aid merely physical forces with art, and secure for every patient as painless and as prompt delivery as is consistent with the greatest possible safety to both mother and child.

I may be permitted to add as a word of caution to the many students of the final year who read this journal, that the expression of some of these ideas in their examination papers might not have as happy results as the full adoption of them later on in their practice will be sure to have.

CONSERVATISM IN THE TREATMENT OF TUMORS — PRELIMINARY OBSERVATIONS.

BY THOMAS H. MANLEY, M.D.

Professor of Surgery in New York School of Clinical Medicine.

ADVANCED and more definite knowledge of the diagnosis, or the treatment of new formations, has not been so great as is generally supposed.

The so-called benign tumors give the patient so little concern that he is rather disposed to leave them alone, unless they become unsightly, or he is led to fear their taking on degenerative changes, at a later period.

The difficulties and apprehension cease only when from the special site of the growth, or its surface characters, one is suspicious of malignancy.

What are the positive characters of malignancy? Have we any positive proof that it is a purely local process, or a local manifestation of a constitutional disturbance: in other words, are the determining and proximate causes of sarcoma or cancer known? Our latest and ablest authors, among whom may be cited Billroth, Virchow, Tillman, Paget and Heitzman, candidly acknowledge their utter ignorance of the cause of tumors.

How absurd and preposterous then must it be to pretend to deal on "scientific" principles with a lesion whose etiology has eluded scientific investigation.

But on the side of diagnosis the line is more sharply drawn, for here it is boldly stated that, with the resources of science at our command, mistake or error is quite impossible, as the laws of pathology are fixed and invariable. Here is another fallacy which should be uncompromisingly resisted and refuted. There has been no word in the whole vocabulary of medicine so much abused as this one of "Pathology." Treatise after treatise is being issued from the medical press, entitled "Pathology," which, in point of

fact, treats of *morbid anatomy*, and that quite alone, a branch of medical science which deals entirely with dead structures and elements. The morphologic, finer elements of no tissue in the *living* human body can be studied. In order to study anatomic elements, the tissue must first be devitalized, by severance from its vascular supply, finely divided, hardened, and stained. This is *morbid anatomy*. *Pathology*, it should be remembered, deals entirely with the phenomena of life, undergoing certain deviations and changes in the course of various phases of disease. In the secretions, alone, in life can the finer elements be analyzed.

We are acquainted with, and interpret pathologic changes—vital phenomena—by the aid of physic agencies; we estimate their significance, their immediate effects and remote consequence, by observation, discriminating study, and experience. This is *clinic medicine*, which we thus see is closely allied to pathology.

Having, therefore, a proper understanding of the significance of technic terms, we are the better enabled to decide the relative value of morphologic expedients, or pathologic revelations, in our efforts to ascertain the probable final cause of a certain lesion.

From the above, it is evident that in order to determine the nature of certain ulcers and swellings, we must chiefly resort to two things: First, the *physiologico-clinic* aspect: and, secondly—if deemed necessary—histologic morbid anatomy. In all but exceptional cases the former will suffice. The latter, then, will decide practically nothing, as every microscopist who has any regard for his reputation, must *first* have some knowledge of the symptomatology, and must know what organs or tissue he is dealing with *before* making an examination or giving an opinion.—*The Clinical Recorder*, January, 1898.

Dr. McIlwraith has removed to 34 Carlton Street.

Dr. P. H. Bryce recently returned from an official tour to Windsor.

Dr. Fotheringham has assumed the active editorial work of *The Canada Lancet*.

Dr. Patton has removed from Bloor Street East to Gerrard Street, opposite the Horticultural Gardens.

We are much pleased to be able to announce that Dr. H. T. Machell has almost recovered from his recent serious illness.

From present appearances there will be a large exodus of Canadian physicians to the approaching meeting of the British Medical Association at Edinburgh.

It is expected that the meeting of the American Railway Surgeons Association, which convenes in this city in July next, under the able presidency of Dr. Bruce Riordan, will be largely attended, and hold its sessions in the Normal School buildings.

Selected Articles.

THE ACTIVE PRINCIPLES OF PLANTS IN MEDICAL PRACTICE.*

BY WILLIAM F. WAUGH, A.M.,M.D.,
Fellow of the Chicago Academy of Medicine.

Is the old therapy satisfactory? So little that it injures one's standing to confess to faith in the curative value of drugs. Therapeutic nihilism is one of the earmarks of the truly scientific physician. And the same spirit prevails among the laity, as is shown by the popularity of any method of treatment that is not regular medicine. The way people flock to the advocates of Christian science, faith cure, homœopathy, hydropathy, Chinese and Indian "doctors," (God save the mark!) Father Kneipp, vegetarianism, Perkins' tractors, the grape and whey cures, osteopathy, Keeleyism, electricity, hypnotism, mineral waters and other forms of suggestive therapy, attest to the public's eagerness to take up anything that is not drug medication. The reason is not far to seek. We are not lacking in valuable drugs, but we have not the requisite skill in applying them. We may classify our ignorance under three sections: we lack a knowledge of physiology, of pathology, and of therapeutics. In each there has been progress in the last quarter of the century, but in none has there been developed a great central, comprehensive conception, such as the evolution theory, by which the isolated facts may be grouped into an harmonious whole. Nor has this work progressed so far that the workers in each field can lend a helping hand to those in the others. The human brain has its limitations; there is a saturation point, which we reach sooner than we like; and the pathologist leaves little brain power to be utilized by therapeutic studies. And these have unfortunately taken the form of the exploration of a vast number of new remedies, introduced and pushed by commercial interests. During their transient popular term someone reaps a harvest and then the drug is forgotten, its true value lost sight of in the crowd of its successors.

I desire this evening to call your attention to some improvements in dealing with old drugs. The profession tends more and more to the use of chemical remedies, the reason for neglecting drugs of vegetable origin being the uncertainty and variability of the latter class. This objection is emphasized occasionally by such occurrences as this: A patient had been taking the fluid extract of conium, gradually raising the dose to 40 ℥. Refilling the pre-

*Read before the Chicago Academy of Medicine, January, 1898.

scription, the druggist dispensed Squibbs' fluid extract, and after the first dose the patient died. Desiring to ascertain if this uncertainty were exceptional or not, I purchased samples of all the various makes in the market, of the fluid extracts of nux vomica, belladonna and aconite, ten varieties of each, and placed them in the hands of a chemist for analysis. He found that no two, were of the same alkaloidal strength, the difference between Squibbs', the strongest, and Warner's, the weakest, being in the proportion of ten to one; the others being strung along at various points between these two. Obviously, the physician who had been giving his patient enough of Warner's extract to produce its physiological effect, would make his patient very uncomfortable if any other make were substituted, and certainly kill him if Squibbs' or Parke, Davis & Co.'s product were employed. For certainty of effect, then, the doctor who prescribes fluid extracts must specify the make, and see that he gets it. How many do this? If not, one ceases to wonder that the doctor becomes skeptical, for an occasional manifestation of unexpectedly powerful effects renders him cautious, and reduces him to infinitesimals or chemical products.

The same objection holds good as to every other preparation from plants. Alcohol evaporates from tinctures. Powders lose strength. The value of plants varies with the soil, climate, season, and many other things. Cultivated herbs are inert, especially digitalis, of which the second year's leaves of wild plants, growing in England, are supposed to be furnished. Their activity depends upon five glucosides, of which digitin is inert, and digitonin exerts a contrary effect to the other three. These comprise all the remedial virtues for which digitalis is used, one being said to excel as a heart tonic, another as a diuretic, the third as a hemostatic. It seems that one might with propriety employ each of these alone for the purpose desired, and not the entire plant, with the antagonistic digitonin and the tannic, digitalic and antirrhinic acids, volatile oil, fat coloring matter, chlorophyle, albumen, starch, sugar, gum, lignin and salts, all inert or of unknown properties.

Cinchona was given to break up malaria attacks in doses of an ounce of the powdered bark; and a dose it was. The use of the extract reduced the bulk to thirty grains, and now we simply give the alkaloid ten grains. This was the first step towards alkaloidal medication, and no one now dreams of retracing: though the text-books long held out that the results from quinine were not equal to those from the bark.

The poppy has long been used as a sedative, and some of my text-books recommended poppy-heads. Opium came next; then we learned to prefer morphine for relieving pain. Study of the drug showed that of the other components of opium, codeine relieves cough better than morphine, and without interfering so much with the elimination and the digestion. Then why use opium when we want the codeine effect? Why morphine when we desire the anti-periodic action of narcotine, the convulsant and tetanizant

action of the baine, the mild hypnotic properties of narceine, the narcotic convulsant power of papaverine. Why give the other eleven alkaloids, three neutral principles and two acids, of whose action we know nothing, when by using one of the alkaloids named we get exactly what we do want?

In jaborandi there are two alkaloids, pilocarpine that causes sweating, and salivation, jaborine that checks both. The varying proportion of these explains why it is that when we give the fluid extract of jaborandi to produce sweating it sometimes thus does just the opposite. And this holds good in regard to that other valuable property of jaborandi, that of exciting the flow of milk. Such experiences have induced us to abandon jaborandi for pilocarpine.

Belladonna dries perspiration and saliva, dilates the pupil, reddens the skin, and in over-doses causes delirium. Hyoscyamus is a feeble sedative, but little used except as an adjuvant: while stramonium is a popular remedy for asthma. In this group of plants are found a number of active principles, such as atropine, hyoscyamine, hyoseine, daturine, duboisine and scopolamine: which, however, have been reduced to the first and last, the others being simply compounds of, or identical with, these two.

From atropine we obtain the effects of belladonna: while in scopolamine when freed from atropine we have the most powerful and prompt hypnotic known, when given in suitable cases. All the effects obtained from the crude drugs can be better had from these two alkaloids, singly or combined, while the latter is lost completely in the plant preparations, as it is covered up by the accompanying atropine.

In nux vomica we find two alkaloids, strychnine and brucine. The former is more powerful, more enduring, but slower in getting to work. Brucine is milder, its effects do not last as long, but its action is manifested more speedily. A valuable distinction may be made in the use of these, that is not possible when nux itself is employed.

In its progress medical science has separated the affections comprised under the name of indigestion, and taught us to administer acid pepsin for indigestion of proteids, diastase for starch indigestion and bile, with pancreatic extract when fat disagrees. It would be a step backward to mingle all these agents and give them indiscriminately in all forms of indigestion. Progress does not lie in that direction, but it does lie in the direction of specializing still more accurately our therapeutic weapons, and differentiating still more carefully the conditions of disease with which we are coping. And herein lies one of the greatest merits of the alkaloidal therapy, that its wonderful little "arms of precision" require a like nicety of diagnosis; its "rifle-shot" hits the bull's-eye only when the aim is accurate.

Let us briefly consider its limitations:

Active principles have not been isolated from all drug plants, and these must be administered in the old forms.

Many valuable remedies, oils, salts, etc., are not alkaloidal, and nobody here claims for the active principles the exclusive occupancy of the therapeutic field.

The alkaloids do not exactly represent the virtues of the plants from which they are derived, nor their vices. When the effect of the drug as a whole is desired, it had better be given. The active principles must be studied and prescribed for themselves. The use of the latter requires closer study of the phenomena of disease and the effects of remedies, and the doctor is a better one for such a study. He will find a new world opening before him.

The active principles alone permit accuracy of dosage and consequent uniformity of effect. They are quickly soluble, and hence give speedier results than the cruder forms. As a rule the alkaloids are much pleasanter to take. Apart from their accurate dosage they are much safer, for the method by which they are administered renders an over-dose impossible. To explain: The science of to-day has produced no better guide than the fixing of a dose for an adult, let it be a blacksmith weighing 250 pounds, or a delicate woman weighing 80. The dose for children is regulated by age, regardless of the diversity in weight, strength, etc. Text-books on therapeutics speak of the numerous circumstances that modify the effect of doses, but no active practician ever makes more than the roughest approximation at them, even with preparations of unknown strength. And even then he leaves out of his calculation the influence of idiosyncrasy.

By the dosimetric method a very small dose, too small to do harm in any case, is given every quarter to one hour until the desired effect has been obtained, and then stopped. For instance: A prominent citizen was seized with gall-stone colic in an eastern city. The doctors gave a hypodermic injection of morphine—no effect; another—no effect; doubled the dose—no effect; again doubled it—and just then the calculus shot out of the mouth of the gall-duct into the duodenum, the antagonistic effect of the pain was suddenly removed, the whole force of the morphine was at once manifested and the patient died, narcotized.

Had an alkalometric physician been called he would undoubtedly have sent at once for an anæsthetic, knowing something about the nature of spasm; and meanwhile he would have administered atropine, gr. 1-500, with a like dose of nitroglycerin to open the vessels and let in the atropine as quickly as possible. This dose he would have repeated at intervals of fifteen minutes, until relief was experienced, at the same time employing the usual accessory measures. He would have had the patient easy before the chloroform reached the room, because his remedies are more powerful than morphine in relaxing the spasm of the gall-ducts. Even in ten doses he would not have approached the danger line. And if any one of my hearers doubts the efficacy of these little doses, he has something to learn yet.

I must add a few words on the relations of alkalometry to

the medical profession. In France the dosimetrists have founded a new medical sect, with an organization, and members who practise exclusively with a limited number of the active principles. It is, in fact, a new homœopathy, with a much better foundation. The system was introduced here with the same object, and the agents of the French granule makers publish a journal teaching this exclusive system. American physicians have not followed this lead, but have insisted that alkalometry is simply an improvement in medication, not a new school of practice.

This is due to the firm stand taken by those who first gave character to the alkalometric movement, among whom I may mention Aulde, Shaller, Abbott and myself. I am firmly convinced that were we to erect the standard of revolt, we would in five years rally to it at least 20,000 physicians, many of them from the eclectic and homœopathic ranks. Indications of uneasiness among the leaders of these sects are already manifest.

The system devised by Burggraeve is based upon (1) the use of the active principles; (2) the prominence attributed to vaso-motor conditions in disease, and (3) the use of strychnine arseniate as a "vital incitant." This drug, with aconitine as a remedy for congestion and atropine as a dilator of the cutaneous capillaries, fulfils by far the largest number of his therapeutic indications.

I have not time, however, to discuss the principles of alkalometry at present, being limited this evening to the use of active principles. I thank you for the courteous hearing you have given me.

103 State St., Chicago.

PHYSICIANS AND APOTHECARIES IN PURITAN NEW ENGLAND.

BY HERBERT C. VARNEY, ST. PAUL, MINN.

Of physicians and apothecaries in early New England it may almost be said that for the first hundred years there were none; that is, in the sense of the word as we understand it.

It must not be inferred from this, however, that our Puritan forefathers were without medical attendance: far from it, but the physicians in those days were the ministers; these were men of education and learning, nearly all of them being graduates of the University of Cambridge in England, and those of a later date of Cambridge in New England.

Many of them had been ejected from their livings for non-conformity, and some of them had taken up the practice of medicine to obtain a living. Others, after coming to this country, in order to support themselves—their pastoral salaries being insufficient—studied a few medical books, and then ministered to their neigh-

bors in both spiritual and temporal things. It was in the hands of such men that the practice of medicine was placed for nearly the first hundred years of New England's history.

The first New England physician of whom I find any record is Dr. William Gager, who came out in the spring of 1630, probably in the same fleet with Winthrop. Not being used to life in a new country, he could not endure the hardships of his new surroundings, for his death is recorded at Charlestown in September of the same year. John Dean, or as he styled himself "John Dean Chirurgeon," was an early physician of Ipswich, Mass. He died in 1648. His son, Philemon Dean, was one of the early physicians of his native town, renowned both for his skill in medicine and for his standing in the meeting house. His gravestone, with its quaint Puritan epitaph, still stands in Ipswich.

"Here lies ye body of Doctor Philemon Dean who died October ye 18th, 1716, aged 70 years.

O Lord, by sad and awful stroaks,
Of man's mortality;
O let us all be put in mind
That we are born to dye.
Grave saint behind that cannot find,
Thy old love night or morn.
Pray look above, for there's your love
Singing with ye first born."

The last two lines of this stanza were quite popular among Puritan epitaph makers.

Another famous physician of Ipswich was Dr. Thomas Wells, more often spoken of in the old records as Deacon Wells. He died in 1666 By his will he left to his son "phissic books" valued at about nine pounds.

Some of the early physicians who came to New England found the practice of medicine but a "meene help," at least Giles Farmin of Boston found it to be such. He came in 1633, and is spoken of in the records as a "goodly man, an apothecary of Sudbury in England." In an account of his life written by himself he says: "Being broken from my study in the prime of my years, from eighteen to twenty-eight, and what time I could get in those years, I spent in the study and practice of physick in that wilderness." The wilderness afforded him but a very "meene" living, for in a few years we find him back in England again, and exchanging the profession of medicine for that of theology, when he became quite a noted minister. He has left one tribute to his early New England neighbors which is worthy of repetition. Before a meeting of divines held at Westminster in 1654 he said: "I have lived in a country seven years; all that time I never heard one profane oath and all that time never did I see a man drunk."

The most famous of the early physicians of Boston was Dr. John Clark, who had also settled for a time at Newburg. He was the first physician in this country to perform the operation of tre-

panning the skull. Dr. Clark died in 1664, aged sixty-six years. He had a son also a doctor, who was one of the early settlers of Rhode Island.

James Minott was a physician at Concord, and from the inscription on his gravestone must have been a little of everything else.

"Here is interred the remains of James Minott, Esq., A.M., an excelling Grammarian, enriched with the gift of Prayer and Preaching, a commanding Officer, a Physician of great Value, a great lover of peace as well as of Justice, and which was his greatest glory, a Gentleman of distinguished Virtue and Goodness, happy in a virtuous Posterity, and living Religiously died Comfortably, Sept. 20, 1735, aged 83 years."

The first women who tried to engage in the practice of Medicine in Massachusetts do not seem to have met with very good success. The famous Anne Hutchinson tried her hand at medicine, but on account of her religious opinions was banished from the colony. Another, Margaret Jones of Charlestown, was indicted and found guilty of witchcraft upon the following evidence:

1. She was found to have a malignant touch, so that whosoever she touched were taken with deafness and vomiting.

2. She practised physic; her medicines being harmless, such as anise seed and liquors, yet they had extraordinary and violent effects.

3. She had told those who would not use the "physicke" that they would never get well, and accordingly their diseases continued, contrary to the efforts of the physicians and surgeons.

4. She had the witches' marks.

In spite of her protestations of innocence, poor Margaret was hanged as a witch on Boston common in 1648. Those were the days when this law was on the statute books: "If any man or woman be a witch, that is, hath or consulteth with a familiar spirit, they shall be put to death."

Almost without exception in all the early settlements of Massachusetts and Connecticut the practice of medicine was carried on to a greater or less extent by the ministers. This union of medicine and religion was called by Cotton Mather "an angelic conjunction." The first medical treatise published in America was by one of these minister-physicians, Thomas Thatcher, and is entitled "Brief Rules for the Care of the Small Pocks," 1677.

Probably the most famous minister-physician was the Rev. Michael Wigglesworth, who was born in Yorkshire, England, October 28, 1631, and was brought to this country when a very young child. He entered Harvard College in 1647, and graduated with the class of 1651. After his graduation he was appointed a tutor at the college, and during that time prepared himself for the ministry and was ordained minister at Malden in August, 1656. After his ordination his health became so poor that he had to spend some time abroad, and was never of a very strong constitution. For nearly fifty years he served the church at Malden faithfully, both as minister and physician, as Cotton Mather said of him, "lively

unto death." He died in 1705. Wigglesworth will always be remembered for his production of that sulphurous poem the "Day of Doom," which was very popular in its day, and also of a book called "Meat Out of the Eater." An extract from the "Day of Doom" may be interesting. The following is one describing the punishment of hell:

"For day and night in their despite,
Their torments smoke ascendeth;
Their pain and grief have no relief,
Their anguish never endeth;
There must they ly and never dy
Tho' dying every day;
There must they dying ever ly
And not consume away."

His death was lamented by Cotton Mather in the following poetical effort:

"His pen did once meat from the eater fetch,
And now he'sgone beyond the eater's reach;
His body once so thin was next to none.
From hence he's to unbodied spirits flown;
Once his rare skill did all diseases heal,
And he does nothing now uneasy feel;
He to his paradise is joyful come
And waits with joy to see his Day of Doom."

His gravestone, bearing the following epitaph, still stands in Malden burying ground:

"Here lies buried ye body of that faithful servant of Jesus Christ, ye reverand Mr. Michael Wigglesworth, pastour of ye Church of Christ at Maulden, who finished his work and entered upon an eternal Sabbath of rest on ye Lord's Day, June ye 10, 1705, in ye 74 year of his age.

Here lyes in silent grave below,
Maulden's physician of soul and body two."

Even in their dual capacity, these minister-physicians had a hard struggle to obtain a living, having to take their pay in anything they could get—cordwood, codfish, grain and such like produce. The records show that they were very poorly paid. A physician's fees were only six pence a visit at Hadley and Northampton in 1730, and eight pence at about Revolutionary times. Tooth-drawing cost 8 pence extra. One independent New Haven doctor charged a shilling a visit, and got it.

A good idea of the physicians' fees in England a little earlier than this may be obtained from the funeral bill of John Dudley, who died at London in 1580. He was a brother of the Thomas Dudley who came to New England.

To Dr Astlow for his attendance during his sickness	£6
To the pottacarie for his bill	5
To Dr. Smith and Dr. Hector at the oapening of the bodie	6
To the surdgeons for oapening searing etc. of the bodie	7.s5
To a poore man that made an epitaphe	.s10

The total of his funeral expenses was about 310 pounds. From this it will be seen that only about 25 pounds were for medical

attendance, including the 10 shillings that went to the "poore" man that made the epitaph.

The small fees of the olden time led the physicians to adopt all kinds of expedients to help them to get a living; most of them compounded their own medicines and sold them to their patients; this may account for some of the mammoth doses of those days. Others were innkeepers, schoolmasters and storekeepers; one was a butcher, and this in more ways than one.

A noted physician was Dr. Nathaniel Ames of Dedham. He was doctor, innkeeper and also wrote almanacs. In 1725 he began the publication of his almanacs, and continued to do so for thirty-nine years. His house of entertainment was at the sign of the Sun, eleven miles from Boston.

Even the quack soon found his way to this new land. "Runnagate chyrugeons" and "physickemongers" they were called. In 1631 Nicholas Knapp was fined and whipped at Boston for pretending to cure the scurvy with a "water of noe worth" and which he sold "att a very deare rate." The same treatment might possibly be used with advantage on some of their nineteenth century descendants.

With the doctors making and selling their own medicines, and the people preparing many at home, there was no room left for the apothecary, and we find none at all until 1761, when Thomas Hanasyd Peck of Boston advertises "plain buttons, black thread, cards, lace and small bowstrings, verdegrees, copperas, men's and boys' felt hats, castor and logwood." I have found one advertisement of that time which may be that of an apothecary, in the Boston *Post-Boy* of September 8, 1760:

JOHN LORING.

At his shop near the Great Trees. A fresh and General Assortment of Medicines, both Clinical and Galencial. Spices of all sorts; likewise Redwood Logwood, Allum, Copperas, Brimstone, etc. N.B.—True Lockyer's Pills Bateman's Drops, Stoughton and Duffey's Elixir, etc., etc.

Through this conglomeration of doctoring, preaching, butchering and tavern keeping a great deal of the science of medicine in this country has passed into its evolution down to the present time. Looking back at that little handful of resolute men who first obtained a foothold on the rock shores of New England, we can only be amazed at what has taken place since then. We should also be very thankful, too, for it was through the struggles and trials and efforts of our Puritan forefathers that many of the comforts and blessings we now enjoy have been produced. Some of them foresaw the future of this country in their day, and were glad. I can find no better closing than the prophetic words of Edward Johnston, in the Wonder Working Providence of Zion's Saviour in New England, 1654: "The Lord Christ intends to achieve greater matters by this little handful than the world is aware of."—*Chicago Med. Standard.*

Medicine.

THE LOCAL TREATMENT OF PAINFUL ULCERATIONS BY ORTHOFORM, WITH SPECIAL REFERENCE TO THE UPPER AIR PASSAGES.*

BY EUGENE S. YONGE, M.D.EDIN.,

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UNDER the name of orthoform, a new synthetic product related in constitution to cocaine has been produced by Professor Einhorn and Dr. Heinz, of Munich, for the production of local anæsthesia.[1] From a chemical[2] point of view the history of the building up of orthoform is of some interest, and may be epitomised as follows. The authors of the investigation set themselves the task of finding the hypothetical molecule hidden in cocaine or its derivatives which would produce local anæsthesia without accompanying toxic effects.

It is assumed that cocaine is constituted of a double ring in which a benzoyl-oxy-piperidine-carboxylic methyl-ester (having a methyl group attached to the nitrogen) is associated with a hydro-aromatic ring of the hydr-benzoyl-oxybenzoic methyl-ester. The analytical observations of Stockman,[3] Filehne,[4] Ehrlich,[5] and Poulsson,[6] who split up the molecule and showed that none of the products obtained by this process were capable of producing local anæsthesia: and the more or less synthetical experiments of Liebreich, Poulsson, and Ehrlich elucidated matters so far that it became a question as to whether the peculiar anæsthetic quality of cocaine was dependent on its double ring nature, on some property of the first ring, or on an influence existing in the hydro-aromatic ring. The last was a reasonable hypothesis, more especially since it was known that certain other aromatic substances, such as methylene blue,[7] possessed the property of relieving pain. Impelled by the foregoing considerations, a prolonged and elaborate investigation was undertaken by Einhorn and Heinz into a large number of these substances, with the result that they were led to conclude that all aromatic amidoxyesters cause local anæsthesia, though in different degrees of intensity and with varying powers of irritation. A substance (p-methyl amido-m-oxybenzoic acid) of this class, to which the trade name of "orthoform" has been given, appeared to act most strongly as an anæsthetic and not at all as an irritant.

Orthoform is a white voluminous crystalline powder without taste or smell; it is not hydroscopic, and melts at 120° C. Free orthoform combines with hydrochloric acid, forming a hydrochloride

*Read before the Manchester Therapeutical Society.

which is more soluble than the basis powder, but causes irritation to some mucous membranes on account of its acid reaction. The hydrochloride (price 6s. 6d. per ounce) is the preparation on the market, and the dose is eight to sixteen grains. The anæsthetic presents a triple claim to recognition, in that it is sparingly soluble, is non-toxic, and is powerfully antiseptic. On the other hand, it is a disadvantage that the substance will not act on unbroken skin, nor, with certain reservations, on intact mucous membranes, for its strong anæsthetic properties are only manifested where nerve endings are exposed. The slow solubility leads the anodyne to exert its action economically on the tissues, and unlike its rapidly soluble congener, cocaine, only sufficient is dissolved to produce and keep up local insensibility, which therefore becomes prolonged. In from five to ten minutes after application anæsthesia of the denuded surface to both touch and pain commences, and it reaches its consummation within a short period of time. The effect lasts from a few hours to five or six days, and there is, in the majority of cases, perfect or nearly perfect analgesia, the patient experiencing the sensation of the offending part having been cicatrised over or "enamelled." Suppuration is usually markedly diminished and healing accelerated.

The observations which I have made on the pharmacology and clinical effect of orthoform have been principally confined, on the one hand, to a consideration of such preparations as would be suitable for applying to the upper air passages, and on the other hand, to the effect of the drug on ulcerations of these regions. Orthoform is soluble in water, the basis powder very sparingly, and the hydrochloride much more freely. It is also dissolved by ether and spirit. The drug is practically insoluble in normal saline solution, in glycerine, and in paroleine, and although suspended in the last-named vehicle, the particles of powder are too large to pass through the ordinary atomiser. The most suitable preparations appear to be:

(1) *The crude powder*, either alone or mixed with equal parts of lycopodium, which should be accurately insufflated on to the required area, since orthoform only takes effect where it comes in contact with the abraded parts, and its influence does not extend to the tissues beyond.

(2) *Pastilles*, with the following formula: ℞ Orthoformi, gr. iij to v; liq. cocci, q.s.; saccharin, gr. ¼; glyco-gelatini, q.s. The pastilles are useful in mouth, tonsillar, and posterior pharyngeal affections but less so than the two succeeding preparations.

(3) *A saturated solution of orthoform in collodion*, forming a species of "varnish." This is useful in those cases in which an ulcer is exposed to much friction, but as it causes acute smarting it is advisable to primarily anæsthetise the ulcer either with cocaine or with orthoform in powder.

(4) *A spray*, with this formula: ℞ Orthoformi, gr. v; sp. vini rect., aquæ, āā, ℥l. This is perhaps the best form in which to administer orthoform for nasal and laryngeal ulceration. The spirit

evaporates shortly after contact with the parts, leaving the precipitated powder evenly distributed over the affected area.

(5) *An ointment* (10 per cent.) made with any good ointment basis.

(6) *An aqueous solution* (10 per cent.) of the hydrochloride as a paint.

The action of orthoform on the unbroken mucous membrane of the mouth, naso-pharynx, and larynx is, in my experience, the following: Neither the free orthoform (basis powder) nor the hydrochloride anæsthetise sufficiently to allow of surgical action. When applied to the tongue, inner surface of the cheek, or to the pharynx, a numb sensation supervenes in the course of about five minutes, but there is little real anæsthesia. The effect on the larynx is to reduce reflex irritability. A peculiar feeling described as similar to that produced by cocaine, is experienced in five minutes; in a few more minutes this relative loss of sensation vanishes, but if before its subsidence a probe be introduced and the vocal cords and interior of the larynx touched, although a species of "gagging" ensues, there is no laryngeal spasm or cough. In the same patient a similar procedure without the previous introduction of orthoform causes intense discomfort and a fit of coughing. The intact nasal mucous membrane is also slightly amenable to the influence of the drug. A feeling of numbness is evidenced in about two minutes, and this merges into real anæsthesia, which is, however, feeble and transient.

I have had the opportunity of testing the anæsthetic value of orthoform in eighteen patients who suffered from painful ulcerations of the upper respiratory tract, and a few representative cases are now quoted.

Case x.—L. F., aged 24. Tuberculous ulceration of the epiglottis; phthisis The pain on swallowing and on coughing was intense, and the patient had avoided any but liquid food for three months. A ten per cent. solution of cocaine gave more or less ease for six hours. Five grains of orthoform were insufflated on to the ulcerated surface, and relief began within an hour and lasted for thirty hours. The pain on swallowing and coughing was reduced almost to *nil*, and the patient succeeded in taking food with comfort for the first time for more than three months.

Case iii.—H. H., aged 56. clerk. Epithelioma of soft palate and tonsil. There was an offensive cavity in the position of the left tonsil, a large ulcer to the outer side, and advanced glandular infection. The patient suffered intense pain on swallowing, and also was much afflicted by severe and constant neuralgia from the deep pressure of the growth. Orthoform (5 grains) was blown into the cavity and upon the ulcer, and relief began in the course of half an hour. Almost all pain on swallowing was abolished, and this improved condition lasted a week. The man ate some solid food (about half a mutton chop with bread) within a few hours of the application after a long abstinence from all but liquids. The neuralgia was not diminished at all.

Case VI.—Mrs. H., aged 35. Tuberculous ulcer on posterior and upper surface of the right arytenoid. Phthisis. There was some dysphagia, and it was a matter of difficulty, owing to the peculiar situation of the breach of surface (exposed as it was to constant friction), to persuade any drug to remain in contact with it. A thick paint of orthoform and collodion was applied, with the result that the patient expressed herself considerably relieved from the dysphagia—this condition lasting about twelve hours.

Case VII.—E. M., electrician, aged 54. Laryngeal and pulmonary phthisis. Had pain on swallowing for two months before admission to hospital. This was gradually getting worse, and solids, semisolids, and liquids caused great discomfort. He "could not take any breakfast at morning" in consequence. Orthoform (grs. 5 of the basis powder) was insufflated into the larynx, and relief began within half an hour, when saliva could be painlessly swallowed. A solid meal of chop, bread, and potatoes was taken three hours after the application with little or no inconvenience. A feeling of dryness in the laryngeal region began after the meal, but relative relief lasted for twelve hours. The next morning the throat was extremely sore.

Case II.—H. B., aged 40, striker. Laryngeal and pulmonary phthisis. Interarytenoid thickening and an ulcer on the left cord posteriorily. There was considerable pain on swallowing even liquids or semisolids. The patient—a very intelligent man—was instructed to use a laryngeal spray of a solution of orthoform. After the first application the drug, which "acted like cocaine" (to which he had been accustomed) gave relief in five or ten minutes, and this lasted for four hours. A second application gave comfort for two hours, and a third (of the powder) gave complete ease for three hours and modified comfort for twelve hours. The ulcer rapidly improved, and the pain eventually ceased to trouble the patient.

Case I.—F. B., aged 19. Scarlatina anginosa with much ingestion and ulceration of tonsils and fauces. Excessive discomfort on swallowing. Orthoform gave relief for twelve hours, and the youth could take his meals comfortably.

Case XVI.—L. G. Syphilitic ulcer of left tonsil causing great pain and dysphagia. Pain absolutely relieved by powder in 10 or 12 minutes; the parts were then painted over with a saturated solution of orthoform in collodion. The patient, who had been unable to eat for some days without agony, took on reaching his home, a good meal of beefsteak with comfort, but was disappointed to find that two hours after the relief commenced the pain was beginning again, and in another hour was as bad as ever. A similar result followed a second insufflation and painting.

Case IX.—G. S. Intranasal ulcer of catarrhal origin which had become irritated or septic. Situated on floor of nose, about 1½ c.m. from external nares, and extending on to septum. Infiltration of surrounding parts, and great pain and tenderness of the nose generally. After insufflations of orthoform, relief began in 5 or 6

minutes, and lasted several hours. The breach of surface also began to heal rapidly.

I am indebted for the notes of Cases ix, xvi, and vi to my friend, Dr. Haring, whose patients they were.

Toxic effects were not noted in any of the cases, but there was occasionally some slight burning for a few minutes after the application of the hydrochloride. This failure to discover toxicity is compatible with the statements[1] that over 12 drachms have been sprinkled on a broken surface in the course of the week, also that 30 to 60 grains have been administered daily to rabbits, and 45 to 90 grains to dogs, without evil effects during life or the *post-mortem* discovery of visceral changes. Orthoform fails to produce any results on an ulcer unless the dual precaution is taken to apply the drug directly to the loss of surface and to ensure its retention there.

No relief was experienced by patients suffering from either catarrhal pharyngitis or quinsy.

The drug in doses of 8 to 16 grains is said to be of value as an anodyne in ulcer or cancer of the stomach. In cases of ulcer, complete relief for three or four hours has been obtained, and one patient with cancer benefited in this way for twelve hours. Orthoform is also declared useful in burns, ulceration of the vulva, chronic cystitis, traumatic lesions of the urethra, gonorrhœa, and other cases.

The antiseptic action of orthoform appears to be demonstrated by the rapid diminution of purulent exudation in several of the cases encountered, and the speedy healing of the ulcer. In a case of acute gonorrhœa[1] injections of orthoform solutions were followed by the disappearance of gonococci in four days, and the complete cessation of blenorrhagia.

Finally, if further observations confirm the results already published, it would appear that orthoform is entitled to take a position in the gamut of local anæsthetics applicable to the upper air passages. It seems probable that it will replace—by virtue of its insolubility and innocuousness—its relative, cocaine, when long anæsthesia on ulcerated surfaces is wished for; be replaced by the more reputed drug when short insensibility of intact mucous membrane is desirable, and on occasion supplement it.

My best thanks are due to Professor Dr. Einhorn, of Munich, who has on several occasions assisted me in the most courteous manner; also to Drs. Hodgkinson, Hutton, Moritz, Haring and Fenn, on the staff of the Manchester Consumption Hospital; to Dr. Wild, Physician to the Manchester Skin Hospital; to Dr. Mercer and Dr. Hodge, all of whom have very kindly given me clinical material or other generous help. W. J. W.

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Gynæcology and Obstetrics.

VALVO-VAGINITIS IN CHILDREN.

Dr. M. Stone (*Annals of Gyn. and Pedy.*, January, 1898) says that in the treatment of this troublesome affection, his personal experience has convinced him that by far the best was the injection of graduated solutions of permanganate of potassium. The writer begins with the injection of a pint of a weak solution (1-16000) given twice a day through a soft rubber catheter (No. 10) gradually increased to 1-800 by the twenty-first day, if necessary. If after four weeks gonococci are still present, he alternates this with the instillation of a little two per cent. nitrate of silver. A case was reported in which the use of argonin had been extremely satisfactory, and the hope was expressed that further experience would show that in this drug there had been found an almost ideal remedy for these cases. S. T. M'K.

MELANCHOLIA ASSOCIATED WITH PATHOLOGICAL CONDITIONS OF THE FEMALE GENITAL ORGANS.

Dr. M. C. McGannon (*American Journal of Surgery and Gynæcology*, January, 1898), Professor of Diseases of Women and Abdominal Surgery in the University of Nashville, quotes approvingly the statement of Holmes (Chatham, Ont.), that he has cured melancholia in twenty-seven women who suffered with pathological conditions about the genital organs, by remedying the abnormal state. In nearly all of these patients the disease was confined to the cervix. He (Holmes, in *Am. Gyn. and Obst. Jour.*, October, 1897) says: "Affections of the cervix and lower segment of the uterus produce more profound impression on the mental and nervous conditions of women than diseases of other parts of the generative apparatus, because the former are much more abundantly supplied with sympathetic nerves. Next after the cervix the vagina seems most susceptible. A severe vaginitis may produce great mental irritability." S. T. M'K.

TREATMENT OF INCOERCIBLE VOMITING OF PREGNANCY.

Dr. A. Pozzi, of Turin (*New York Lancet*, January, 1898), has observed five cases of incoercible vomiting of pregnancy, which had resisted hypodermic injections of morphine and the internal use of cocaine, but were rapidly cured by hypodermic injections of cocaine

into the epigastric region. Injections of centigram each were made a few minutes before each meal. The patients were thus enabled to keep their food very well, the cocaine exerting no unfavorable action on either the pulse, the respiration, or the temperature. Dr. Pozzi is of opinion that this method of treatment would probably prove useful also in cases of vomiting from other causes. Dr. Page (*American Medico-Surgical Bulletin*, February, 1898) says that at the first indication of nausea or lack of appetite, the prospective mother should sip a few swallows of moderately hot water occasionally during the day, fasting, to make short and easy work of restoring the balance to the system. He has never known a single case of failure when this plan has been intelligently carried out. It may be necessary to skip only a couple of meals, or it may be necessary to fast two or three days. Wait until the patient is again really hungry before giving food. Meanwhile it will be necessary to give from a quart to three pints of soft hot water daily to fulfil the requirements of the system. S. T. M'K.

ASEPSIS AND ANTISEPSIS.

Dr. B. Sherwood-Dunn (*Annals of Gynæcology and Pediatry*, January, 1898) writes a most valuable and exhaustive paper. The closing paragraphs contain some useful information regarding internal antisepsis, which, as he states, is only in its infancy, yet when we contemplate the addition to our therapeutics made by the discoveries in serum therapy and kindred agents to combat the recognized enemies to human life, it offers hope that a few years may render the practice of medicine as fixed in its methods and happy in its results as are those of surgery.

The studies of Bouchard and Dujardier-Beaumetz brought into exact formula the recognized but somewhat vaguely understood auto-intoxication due to fermentation of matters ingested into the digestive tract. These authors have shown that as soon as the digestive act is deranged by fermentation, there is rapidly produced in the matter circulating through the digestive tract a greater or less degree of putrefaction, giving rise to a certain number of auto-intoxicants that compromise the process of general nutrition and show their presence in the functional derangement of the liver, kidneys, and later, the nervous system. The results of the various researches of the past ten years upon this and kindred subjects has established the imperative necessity for gastro-intestinal antiseptics. The remedies recommended as controlling digestive fermentation, salol, salicine, beta-napthol, phenol, aristol, menthol, and, mor recently, beta-napthol-bismuth and subgallate of bismuth, have been tried with varying success. The great claim advanced for kumyss is that it arrests intestinal fermentation and that its disinfectant and antiseptic action in the digestive process is wholly attributed

to the lactic acid it contains; and following this conclusion it would seem probable that the favorable results obtained from the exclusive milk diet in certain cases is due to the lactic acid formed by the chemical interchange that takes place in the digestive tract.

In Europe, about three years since, every doctor had a different gastro-intestinal antiseptic, and the current literature was filled with writings upon their use; now there is a reaction in the foreign societies, and asepsis of the intestines is more often sought than antisepsis. In this relation M. Dominici, of Paris, administered 15 grammes each of the sulphate of soda and magnesia to a patient, and then examined the evacuations for the following twenty-four hours, which amounted to 1500 grammes in weight and were found to contain about four hundred and eleven billions of microbes for the twenty-four hours. The following day the discharges amounted to 410 grammes, furnishing only about half a billion of microbes in all. This strikingly illustrates the benefits of a good purge in any case where the disinfection of the intestines is desirable, and the aseptic condition that follows, although it doubtless is of very short duration, is most pronounced. The surgical antiseptics most generally in favor, namely, the salts of mercury, cannot well be employed in internal antisepsis, calomel excepted. The only practical clinical results obtained with intestinal antiseptics thus far have been those derived from the insoluble varieties, such as subnitrate of bismuth, carbonate of magnesia, napthol, benzo-napthol, and salol. There are many cases of cystites, for instance, which are immediately governed and resolve, after a few days' treatment with salol or boric acid, and there is no reason to doubt the efficacy of charcoal in certain forms of dyspepsia. The experiments of Professor Fournier, of Paris, have shown that the solution of bicarbonate of soda is sure death to the gonococcus, as it cannot survive in an alkaline media. Much has been published in favor of creosote combined with cod liver oil for consumptives. As much as 40 to 50 centigrammes are administered per diem, with markedly favorable results in many instances. Guaiacol, the principal constituent of creosote, has also been recommended, but is probably inferior to creosote.

S. T. M'K.

MASSAGE IN THE VARIOUS DISEASES OF THE FEMALE GENITAL ORGANS.

Rubenstein, of St. Petersburg (*British Gyn. Jour. and Modern Medicine*, January, 1898), gives his observations in one hundred cases, and the following conclusions in different diseases:

1. Cicatricial parametritis. Here massage is a powerful and, in many cases, the only successful means of treatment. Patients lose first the painful sensations and afterwards the distressing pressure-feelings.

2. Exudative parametritis. In this massage forms a good

means of treatment, but should be avoided when the swelling is distinctly thick in comparison to its extent, and when there is increased temperature. All more or less extensive swellings are unfavorable for massage.

3. Immovable retroflexion of the uterus. Here massage is sound treatment. Those cases give the best results in which it is possible to reach the fundus uteri with the external hand in combined examination. After rectification of the uterus the massage should be continued some time. The introduction of a pessary often speeds recovery.

4. In displacements back and to the side the same remarks are applicable as in 3.

5. Inflammation of the ovaries and the adjacent peritoneum. Massage is very good in oöphoritis, especially when the ovaries are fixed, but the results are very slow.

6. Chronic inflammation of the uterus and hypertrophy of the cervix are neither of them suitable for massage.

7. Subinvolution of the uterus after labor yields to massage very kindly, but the treatment must be continued some time.

8. Amenorrhœa. Massage in certain cases will lead to complete re-establishment without pain, and as a rule permanently.

9. Chronic endometritis is not suitable for massage.

10. Mobile retroflexion of the uterus is not very answerable to massage, but in certain cases it constitutes a good method, and fairly successful. In these the indication for further treatment is to be found in the subjective feeling of the patient after the preliminary sittings.

11. In descent and prolapse of the uterus and vagina, and likewise in vaginismus, massage is of no use, and in the latter it is absolutely contra-indicated.

He decides from his observations that the number of sittings varies from ten to twenty of four or six minutes' duration, and spreads over from two to four weeks. Massage of the female genitals is always performed bimanually; and as practically nothing more is required, it is within reach of every medical practitioner. S. T. M'K.

Dr. Dame has resigned his surgeon-lieutenancy of the 48th Highlanders.

Dr. E. W. Goode has gone to New York for a three-months' post-graduate course.

Surgeon-Lieut.-Col. J. L. H. Neilson, of the Royal Canadian Artillery, has been appointed Director-General of the Medical Staff.

Dr. W. E. Hamill, who for years has conducted an extensive business in the purchasing and selling of medical practices in the Janes Building, has found it necessary, owing to his increasing business, to remove to No. 88 Yonge Street.

Pharmacology and Therapeutics.

TANNOFORM.

Tannoform is a condensation-product of tannin and formaldehyde, of the formula $C_{29}H_{26}O_{18}$. It occurs as a loose, reddish-white powder, insoluble in water, but soluble in alcohol, in ammonia water, and solution of soda or of sodium carbonate: it melts with decomposition at 230° C.

According to a number of reports from eminent dermatologists, tannoform is an excellent and perfectly innocuous antihidrotic and siccative antiseptic in bromidrosis (offensive perspiration) and hyperidrosis (excessive sweating) in any part of the body, and in soft chancre, bed-sores, ulcers, ozena, and cervical catarrh.

Professor von Mering has conducted an extended series of experiments with tannoform, and reports as follows:

"Tannoform, used externally in substance or in 20 to 50 per cent. triturations with powdered starch, promptly checks excessive sweating. In bromidrosis of the feet I have repeatedly employed tannoform on the one foot, and tannic acid on the other, by way of comparison, and found that the tannin was considerably less active than the tannoform. Compared with salicylic acid—which is the chief remedy heretofore used against this trouble—tannoform proved to be more pleasant and more efficacious. Tannoform is of service also in the treatment of old wounds, such as fetid ulcers of the leg and running eruptions; it also possesses disinfectant properties. It may be used either pure, or mixed with starch or talcum, or as a 10 per cent. ointment.

"Even when dusted over in small quantities, it quickly suppresses the hyper-secretion of sweat and completely removes all odor. It is greatly superior to any of the remedies hitherto used in cases of hyperidrosis and bromidrosis, and it forms, more especially, a valuable substitute for chromic acid, which, owing to its exceedingly poisonous nature, is highly objectionable.

"Tannoform has the further advantage that it does not, like salicylic acid, tartaric acid and formaldehyde foot-baths, shrivel the skin, or stain it like iron chloride.

"Tannoform differs essentially from tannin. Tannin is readily soluble in water: tannoform in insoluble in that solvent. Tannin has a harsh, astringent taste, and possesses in a marked degree the property of forming hard, very coherent, water-insolvent compounds with the tissue elements. Albumen, peptone, gelatin, mucus, etc., are, therefore, precipitated by tannic acid. After ingestion, tannin rapidly unites with the albuminoids present in the contents of the stomach or adhering to the mucous lining, and, therefore, cannot reach the intestines in active form.

Applied to mucous membranes, especially if in excess, tannin is prone to cause irritation: it may tan the stomach so intensely as to disable it for weeks. Even after the ingestion of small doses of tannin, especially on an empty stomach, the gastric mucous membrane becomes corroded, the appetite diminishes, and a sense of weight and of pain is felt in the stomach.

"Tannoform, on the other hand, exercises no irritant or corrosive action on the mucous membrane, and is indifferent in doses in which tannin would be deleterious to gastric digestion. Tannoform, being insoluble in water and acids, but soluble in diluted alkalies, is not assimilated in the stomach, and, therefore, reaches the intestinal canal unchanged—that is, in an active form. On taking 0.1 to 0.2 gm. (1½ to 3 grn.) of tannin into the mouth, a bitter, harsh taste is experienced, and after the taste disappears the mucous membrane of the mouth becomes much irritated. Tannoform, on the contrary, is tasteless, even if taken in quantities of 1 gm. (15 grn.), and exercises no irritating or caustic action on the buccal mucous membrane. The administration of tannic acid (in chronic intestinal catarrh), even in doses of but a few centigrammes, is sometimes followed by vomiting and a sense of pressure in the stomach: whereas, in these same cases, tannoform produces no such symptoms, even when given repeatedly in 1 gm. (15 grn.) doses."

Drs. de Buck and de Moor conclude their paper on the properties of tannoform with the following words (*Belgique Médicale*, 1896, No. 33):

"The clinical observations of which we have given a short account show, in our opinion, clearly enough that tannoform is a really valuable therapeutic agent. As might have been expected from its composition and chemical properties, tannoform has proved to be an excellent intestinal astringent and antiseptic. In this respect its action bears in every sense comparison with that of its congener, tannigen.

"We would more particularly call attention to the local action of tannoform. We have not as yet met with a single case of local hyperidrosis that has refused to yield to the action of tannoform. Often its action is in fact so rapid as to render it necessary to exercise caution in its application, since the sudden suppression of a process of secretion to which the system has become accustomed cannot possibly be treated as a matter of total indifference. We therefore consider it desirable to induce diuresis (by means of diuretic decoctions of milk) as well as to produce purgative effects (by means of podophyllin and belladonna, cascarin, etc.) in all cases where the patient, having suffered for a considerable time from hyperidrosis, requires effective treatment. It should be remarked in this connection that excessive secretion of sweat is a particularly frequent affliction of nervous patients suffering from gout or anæmia. It may therefore be advisable to endeavor to modify this constitutional anomaly by means of alkalies, nerve-sedatives, and tonics."

CLINICAL NOTES ON A CASE OF HYDROCEPHALUS.

PATIENT, 4-para, aged 38, of fine physique and in good health. Family history exceptionally good.

History of an accident by being thrown from seat of waggon against the dashboard at the fourth month of pregnancy. This I do not think was a factor in producing condition found in child as the ectoderm had long since covered in the nemal canal.

I was summoned to her on March 10th, last year; patient complained of intense pains in the lower part of the abdomen. Internal examination revealed no changes in the os uteri and as firm pressure over hypogastrium did not increase the pain I concluded the pains were merely an exaggeration of the uterine muscular contractions which are normally present throughout pregnancy and imperceptibly increase until its termination. I prescribed an opiate which diminished the severity of the pains. I saw her again on the 11th and 12th, when she remained in a somewhat similar condition at no time being thoroughly free from pain. On the morning of 14th, the os began to be influenced and on the evening of same date the os was fairly well dilated with a small flattened projection of the membranes. Abdominal palpation showed child in left occipito-anterior position, but nothing more definite could be elicited. I see some text-books mention that the diagnosis of this condition can be made by abdominal palpation, but it must be in extremely exceptional cases. Following my usual practice in obscure cases I gave an anæsthetic and made an internal examination first while the membranes were intact, then afterwards ruptured them and continued the examination. With unruptured membranes nothing definite could be ascertained, but with hand in utero the unusual size of head and its resiliency concluded the diagnosis. I now sent for assistance and my confrere agreeing with the diagnosis, I introduced perforation and let out the fluid. Now came the difficulty: I pushed my hand further into the uterus, and although either leg could be easily grasped, version was utterly impossible, so I introduced a blunt hook through the opening made by the perforation and by handwork I managed to get the head to the vulval outlet and the delivery was soon completed, the body of the child was very large, especially the shoulders, and its large size, I presume, accounted for the impossibility of performing version.

The child had also tadlipes equino-varus and spina bifida in the dorso-lumbar region.

The mother made an uninterrupted recovery. The ætiology of hydrocephalus is unknown. The prognosis in those cases is good if diagnosed and treated early, but if the nature of the case is overlooked the maternal mortality has been reckoned as high as 1–4. The diagnosis is by no means easy by the ordinary methods used. Its rarity also increases the diagnostic difficulty, statistics giving it as 1–3000.

The main diagnostic features are the slowness of the first stage, the high position of the head and its compressible character and the actual mensuration of the head by internal manual examination under an anæsthetic. A point I noticed in connection with this case was the small quantity of amniotic fluid, quite in contrast with the large amount found usually in aneucephalic monsters.

A. J. H.

Public Health and Hygiene.

PROVINCIAL BOARD OF HEALTH.

The Provincial Board of Health met in Dr. Bryce's office, January 27, 10.30 a.m. Dr. McDonald, of Hamilton, Chairman; Dr. Bryce, Secretary: Dr. Covernton, Dr. Cassidy, Dr. Vaux, of Brockville, and Dr. Kitchen, St. George, were present.

An interesting pamphlet on the cigarette question was handed in. The article stated that the current opinion that cigarettes are a source of danger is erroneous. There is no opium in the majority of fillers, nor any arsenic in the wrappers. The smoke inhaled rarely passes beyond the bronchi: if it does it is immediately expelled. Cigarette smoking, in fact, is the least harmful method of smoking.

A letter was read from the Board of the Casselman District, about the recent diphtheria outbreak there. The disease had originated in the case of a visitor from Ottawa, who died at Casselman. The disease had been spread by children kissing the corpse and communicating it at schools. Only two deaths had occurred, and the disease had disappeared.

A communication was read from the Toronto Burial Reform Association, who wish to lower the expense of funerals.

The town of Niagara-on-the-Lake sent a report to the Board asking for a solution of the difficulty which had arisen from the dumping of tomato peels in the river by a local canning company. The Board suggested that the dumping pipe be carried out thirty feet into the river, where the current would remove it.

The town of Stouffville submitted a report of a waterworks system which they wished to build, together with an analysis of the water to be used, both of which were approved of by the Board.

A communication from the Hamilton Board of Health gave rise to considerable discussion. It appeared that a young lady from Hamilton had died very suddenly in Boston, and the doctors certified that death resulted from septicæmia. The father had the body taken to Hamilton for burial, and arranged a public funeral. The affair was done so quickly and quietly that the local Board had no opportunity to interfere. It appeared later that the young lady's throat had shown a decided membrane. The Provincial

Board adopted the following resolution: "That for the purpose of preventing the spread of contagious diseases the term diphtheria must be extended to cover all cases in which a throat membrane is a decided feature." This concluded the morning session.

In the afternoon the President, Dr. McDonald, of Hamilton, presented his annual report. He laid great stress upon the benefits which good sanitary legislation had effected in the way of stamping out disease. The Board of Health, he said, had given good aid and advice in outbreaks of contagious diseases. This advice, he was glad to say, had been well received and acted upon by the local Boards. He regretted greatly that such opposition had been presented to their work as was shown by the above mentioned case of a young lady who died in Boston of an infectious disease and was given a public burial in Hamilton. The Board was to be congratulated on the marked diminution of infectious diseases, which would be gone into in detail in the report of the Committee on Contagious Diseases.

Dr. P. H. Bryce then presented the report on contagious diseases. During the last quarter of the year there had been no serious outbreaks in the Province. Two cases only of small-pox had been reported, one in Cambridge Township and one in the Nipissing District. Five deaths from scarlatina were reported. Diphtheria had been reported from twenty-seven municipalities. He laid great emphasis upon the curative powers of antitoxin in cases of diphtheria; in fact, he said: "Neglect to use it can no longer be considered good medical practice." In Massachusetts out of one hundred and thirty-six cases of diphtheria treated with antitoxin only two deaths had occurred, a percentage of 1.5. Similar reports came from New York and Chicago.

The total deaths from contagious diseases during the quarter were: From scarlatina, 5; from diphtheria, 47; from typhoid, 20; from whooping cough, 11.

A report was read from the Medical Health Officer of Guelph, stating that the Secretary of the local Board had been instructed to send to the Provincial Board a copy of his (the Medical Health Officer's) report, omitting the last clause regarding sewerage.

The Board decided that the Secretary of the Guelph Board should be instructed to send in a complete report, including the clause on sewerage.

It was announced by Dr. Bryce that the meeting of the American Public Health Association would take place in Ottawa next September. The sum of $800 has been appropriated by the Provincial Government of Ontario for the purposes of the meeting. The meeting of the Association of Medical Health Officers of Ontario would take place at the same time.

The London Packing Company had caused considerable nuisance by dumping their sewage in the neighborhood of a creek. The Board decided to instruct the local Board of London "that they were justified in seeking an order of the court to compel the pack-

ing company to at once introduce such methods as will abate the nuisance."

The Provincial Board of Health continued its deliberations, January 28, 10.30 a m. Prior to the adoption of the minutes Dr. Cassidy remarked on the necessity of having an explicit legal definition of the term "membrane" as used in the definition of diphtheria. He did not think that a pultaceous deposit should be called a membrane. It was decided that if the Health Officer is satisfied that true diphtheria is not present, but that the streptococcus is evident, he must use his own judgment regarding isolation.

Dr. Bryce read the report of the Committee on the transportation of dead bodies. The following rules were embodied in the report and adopted:

(1) The transportation of the bodies of those dead of small-pox, Asiatic cholera, yellow fever, typhus fever or bubonic plague is absolutely forbidden.

(2) Bodies dead of diphtheria (membraneous croup), scarlatina, scarlet fever, glanders, anthrax or leprosy must be prepared as follows, if they are to be transported: The body must be injected arterially and in the cavities with a fluid approved of by the Board of Health. (*b*) All orifices must be disinfected and stopped with cotton wool. (*c*) The body must be externally washed with a proper disinfecting fluid, approved of by the Board. The body must then be enveloped in a one-inch layer of cotton and placed in a tin or zinc lined box, hermetically soldered, the whole to be then placed in a wooden casket,

(3) Bodies of those dead of puerperal fever, erysipelas, tuberculosis, measles or other dangerous, infectious or communicable diseases must be prepared for transportation as in rule 2, omitting the necessity for arterial injection. The bodies must reach their destination within forty-eight hours from death.

(4) Bodies of those dead of non-contagious diseases may be transported in a casket and zinc-lined box, as in rule 3, provided that they reach their destination within thirty hours from death.

(5) Articles or persons who have been exposed to contagious diseases cannot accompany the body, unless certification of disinfection can be shown from the local Health Officer.

(6) Notice must be sent by telegraph from the initial point of transportation to the Health Officer of the district of destination, stating the time of departure and arrival of the corpse. The body must be accompanied by someone who is provided with his own ticket and certificate and the ticket and certificate of the corpse.

(7) A duplicate of the transit permit must be sent to the Secretary of the Provincial Board of Health, and the original placed on the outside of the box.

(8) Disinterred bodies of those dead from any disease can be transported only under the approval of the Provincial Board of Health.

A proposal was adopted to divide the Province into seventeen

districts for the purpose of facilitating the inspection of transportation of dead bodies. The morning session then adjourned.

At the afternoon session Dr. J. J. Cassidy presented the special report of the Committee on Embalming (*vide* page 94, February issue of this journal).

The report was adopted.

Mr. Mackenzie, the Provincial bacteriologist, then presented a continuation of his report upon the Berlin diphtheria epidemic. He also reported upon the advisability of adopting some method of controlling the sale of antitoxin in Ontario, in order that the public may feel confidence in the strength of the drug, as indicated on the label. The following is the latter report verbatim :

TORONTO. *February 1st, 1898.*

GENTLEMEN,—I beg to report to you upon the result of a test which has been made during the past month upon Messrs. Parke, Davis & Co.'s antitoxin. This firm has repeatedly requested that such a test should be made, but routine work in the Laboratory has been so great that it has been impossible to get time until recently for its completion.

The sample tested was bought in the open market at a drug store, and the test applied was one to determine if the sample contained the number of antitoxic units indicated by the label.

The label claimed that the bottle contained 1000 units; the result of the test showed that it contained over 1200 and under 1500 units, probably nearer 1500 than 1200 units. This shows that the antitoxin was reliable, as it is necessary to place in the bottle a good margin of units in excess of the label strength, so that the loss of units which takes place by keeping, may not be so great as to bring it in a reasonable time below the amount indicated by the label.

Antitoxins differ from other drugs in this respect, that there is no danger in overdosing: the danger is rather the other way, and the rate of decrease in strength due to keeping is determined by factors which are largely not controlled by the manufacturer.

I propose as soon as I can get a sufficient number of animals to carry out similar tests for other antitoxins exposed for sale, and I have no reason to expect from the reliable character of the makers that they will not give good results, but this brings up the whole question as to the action of the Board in regard to the sale of antitoxin in Ontario.

The testing of antitoxin cannot be done without special apparatus and special training, and it is exceedingly important that some body such as your Board should be able to supervise and control the material for sale in the market, so that physicians should be able to feel certain of the strength of the antitoxin which they use.

As yet it is doubtful if there is any danger from weak antitoxin being sent out by the manufacturers, but there is a danger

of its being kept too long in stock, and consequently deteriorating. To avoid this, the makers of antitoxins in America warn purchasers not to use old stock, and the date of testing is placed on the packages. They also offer to exchange old stock for fresh material, so that there is no excuse for a druggist selling material which has been kept too long.

In Germany all antitoxins, as a matter of fact, must be tested at the Imperial test station before they are offered for sale, and this necessitates a test of one bottle from each lot obtained from a house. Such a test could not be made by us in Ontario, but a sufficient control could be kept of the supply by testing occasional samples bought in the open market, and publishing the results.

There is no doubt that the manufacturers would invite such a test, and it is possible that with the tests published, there would not be any need of special regulations, at least at present. But if regulations were required, it would not be difficult to draw up some which would require the antitoxin to be somewhat in excess of the label strength as is required in Germany, and prohibit the sale of antitoxin after a certain period had elapsed from the date of manufacture.

The undertaking of such control tests would be a serious addition to the work of the Board, and the only question which arises, is the possibility of my being able to undertake it with the steady stream of routine work of the Laboratory.

To give you some idea of the work necessary to the test it would be perhaps as well to outline to you the methods which are adopted.

An antitoxin unit is ten times the amount of antitoxin serum which is necessary to mix with ten times the minimum fatal dose of diphtheria toxin, so that when this mixture is injected into a guinea pig of 250-300 grammes weight, the animal shows no evidence of poisoning from the toxin. In testing antitoxin the first step is to obtain a strong diphtheria toxin, and this is done by cultivating a virulent diphtheria bacillus in beef broth for a certain length of time and then filtering out the bacteria.

The next step is to determine the strength of the toxin. This can only be done by direct inoculation of animals, and for this purpose, guinea pigs weighing 250-300 grammes are used as a standard.

It usually takes a dozen animals, at least, to determine the minimum fatal dose, and it may take more. By the minimum fatal dose we have been in the habit of taking that dose of toxin which will kill animals of the standard weight in forty-eight hours. Recently Professor Ehilich has shown that this is somewhat uncertain, and at the Berlin station they now take the dose which will kill in four to five days.

This m. f. d. determined, the next step in the process is to determine the amount of antitoxin which will neutralize the action of ten times the m. f. d. This is done by mixing ten times the m. f. d. with varying doses of antitoxin, and injecting the mixture

into the guinea pigs as near the standard weight as possible. For instance—

Guinea pig, 300 grammes, 10 m. f. d. x 0.0005 c.c. antitoxin—no change.

Guinea pig, 300 grammes, 10 m. f. d. x 0.0004 c.c. antitoxin =œdema (swelling) at point of inoculation.

In such a test 0.0004 c.c. would not be sufficient, whilst 0.0005 would be sufficient. From this we would calculate that an antitoxin unit of this serum would be 0.005 c.c., *i.e.*, $\frac{1}{200}$ of a c.c. of the serum, which means that one c.c. would contain 200 antitoxin units. Such a test requires, as you can see, quite a number of animals, because individual differences occur which have to be eliminated.

It is a question whether, in reporting the results of such a test, it would be well to report the exact result, or to simply say that the test showed the sample to contain, say, over 1,000 units.

In Germany, of course, no report is made public, but the Imperial seal is not used unless it is sufficiently strong, and consequently it cannot be sold.

But here it might be necessary to encourage the putting up of antitoxin of a sufficient strength by publishing the exact strength of the test.

It must be remembered, however, that when we speak of exact results, we do not mean exact in the sense of a chemical test; the test is not a chemical one, but a bacteriological one, and consequently is influenced by biological factors, such as the condition of nutrition of the animals, the surroundings so far as light, air and drainage are concerned, and other factors, such as the degree of inbreeding, etc., and in justice to the manufacturer it would not be fair to require that a test made in Toronto should easily be compared with the results of a test made at the place of manufacture.

Looking to all these questions which I have brought forward, I leave the matter with you for discussion.

I have the honor to be, your obdt. servant,

(Signed,) JOHN MACKENZIE,
Bacteriologist.

The reports were adopted. The meeting then adjourned *sine die*.

DR. W. SHAW has moved to Navan, Ont.

DR. J. H. ELLIOTT has been appointed Resident Surgeon of the Gravenhurst Sanitarium.

DR. W. C. HEGGIE has returned to Toronto, after ten years' absence in Michigan. He has taken the house formerly occupied by Dr. Hunter on Dovercourt Road.

DR. MCDIARMID, formerly of Winnipeg, has been appointed Lecturer on Obstetrics in the Chicago Post-Graduate School, and has removed to that city.

REPORT OF DEATHS FROM CONTAGIOUS DISEASES IN ONTARIO FOR THE MONTHS OF DECEMBER, 1897, AND JANUARY, 1898.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

DECEMBER, 1897.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Scarlatina.	Rate per 1,000 per Annum.	Diphtheria.	Rate per 1,000 per Annum.	Measles.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum.
1,305,851	560	218	5	0.07	39	0.3	0	.	13	0.1	22	0.2	136	1.2
58	74													

JANUARY, 1898.

1,536,825	582	238	16	0.1	51	0.4	4	0.03	8	0.06	13	0.1	146	1.1
67	78													

Population of Province 2,263,492

Municipalities of Province 745

The Canadian Journal of Medicine and Surgery

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Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. III. TORONTO, MARCH, 1898. NO. 3.

Editorials.

THE TIMES ARE OUT OF JOINT.

RECENTLY a city general practitioner, who is said to have a large practice, complained to the writer, that for the last three years, though living in an economical manner, he had lost money. He acknowledged that he had booked fees, but denied that he had received a reasonable percentage of the cash. He contended that the sick benefit societies injure the physician. He knows a workman, a member of three different societies, who can earn more money when sick, through the benefits he then receives, than he

can when in good health and working full time at his trade. This looks like putting a premium on dishonesty and malingering. Then society work is slavish. For instance, a member of a lodge asks his physician to visit him at his house for a trivial ailment. Should the physician refuse, he may expect a volley of abuse at the next meeting of the lodge. A non-society man calls at the physician's office, because he expects to pay less for an office consultation than a visit. Owing to the efforts of lodge officials, or the promptings of self-interest, benefit societies are well patronized. Nearly every third man you meet belongs to some society, so that a general practitioner, who wants to make a living, cannot afford to refuse societies, and tenders for their work on the principle that "half a loaf is better than no bread."

From the Government Inspector's report for 1897, we see that the hospitals are making money—four of the five Toronto hospitals show an aggregate surplus for the past year of $54,678.33. That they do excellent work none will deny. The only person who makes nothing substantial out of this investment of public money is the visiting physician who is not a professor in the school of medicine. If the professor makes anything, it comes out of the pocket of the medical student, who is deluded with the false idea that he is receiving a training to fit him for the practice of a lucrative profession. A question from paterfamilias, who pays for the student's medical education: If the Provincial Government pays 29.39 per cent. of the money annually expended on hospitals in Ontario, why does it not also pay an equal amount of the fees required to train the physicians who, in a few years, will officiate as members of the staffs of these same hospitals? And if the Government does not contribute to the expenses of the medical student's education, by what right does it afterward interfere with his chance of making a living as a physician? The Turkish Government is more consistent. The Turkish troops are well supplied with medical officers who are trained for the military service during a medical course, which extends over six years. The medical officer is educated at the expense of the Government. When he enters the army, after examination, the medical officer pledges himself to serve for twenty-six consecutive years, when he can retire with a pension. If, for any reason except disability, he leaves the service before the expiration of this time, he is obliged to refund the Government for his expenses incurred in obtaining his medical education. This is quite logical. The Turkish Government pays for the education of a surgeon,

claims his services for a term of years, but pays him for the same, and finally pensions him. Not bad for "the unspeakable Turk!"

In 1897, 19,617 persons or 8.78 per cent. of the population of Ontario were treated in forty-three hospitals. In addition, the Ontario Government Inspector tells us that *thousands of outdoor patients* have been treated at the various hospitals during the year. In 1880 there were 5,302 indoor patients and twelve hospitals, thus showing the excessive development of hospitalism in Ontario. A satisfactory and reasonable method of regulating our present system of charitable relief done at the expense of the physician, would be to remunerate the medical staff for their services to the hospital. We may then expect a happy equilibrium. Otherwise, as the Government Inspector suggests in his last report, legislation may be required to prevent the multiplication of hospitals, all striving to outdo each other and using the doctor to help them gratuitously to increase their renown. J. J. C.

THE CITY OF TORONTO SHOULD NOT ENCOURAGE CONTRACT PRACTICE.

MUDDY York became Toronto, and Toronto has grown into a large city. Over this city one man presides as Health Officer, and well he fills his office. Dr. Sheard is indeed a man of many parts, but why any one son of Adam can be expected "to be seated in the Health Office, examine causes of filth and sickness on any vessel in the harbor, analyze well water, look after sewers, visit premises of butchers during the dog-days, examine applications for admission into the General Hospital, consult and advise about street cleaning, visit destitute families suffering from disease, advise the General Inspector of Licenses, look out for diseased animals, fish, fruit, meat, vegetables, etc., inspect maternity homes, stick posters on the houses of feverish but protesting citizens, attend at places provided for public vaccination, superintend endless book-keeping, pay-rolls, mortuary statistics, etc., advise Public School Inspectors pertaining to hygiene, and furnish an annual report," is beyond our comprehension. But in addition to the already named *repertoire* must be added Sub-section 12 of Section 8 of By-law 2,477, passed by the Toronto City Council, January 13, 1890, which says that his duties shall include "attending upon, and discharging the duties of physician and surgeon, when instructed by the

Mayor or the Board, *to any city official or employee* who may at any time be injured while engaged in the actual discharge of the duties of his office or employment: and such attendance shall be regular and continued so long as may be necessary for the recovery of any such official or employee from any injury so sustained." We ask, are not the duties of Health Inspector sufficiently arduous in themselves to debar any one man from acting also in the capacity of City Physician?

Take, for instance, two classes who come under the heading of employees, the firemen, and the "white-winged angels." The first class named, the firemen, who risk life and limb, why should they be so poorly paid that they cannot pay for medical attendance? Surely no men are more worthy of their hire, and when accidents do occur among them they are generally serious, and consequently, why should the over-burdened Health Officer be requested to attend the sufferers? We think the city should give as salaries ample amounts to provide against such contingencies, and a proper proportion of this, when occasion or calamity requires, should find its way into the pockets of regular physicians all over the city.

The by-law calls, we allow, for attendance on any employee who may be injured *while engaged* in the actual discharge of the duties of his office or employment: but are these employees, according to their own belief, ever ill from any other cause? Take the last-named class, the dust-pan brigade. Do they contract pneumonia? It is, of course, according to their statement, while attending to duty. Typhoid fever—the bacillus enters while attending to duty. Nervous prostration—acquired by listening to the "quotations" of irate coachmen, who order them to move out of the way! And so on, and the Health Officer ministers unto them.

We think the corporation of the City of Toronto should not so overwork its Health Officer, and what is equally as important, should not deprive regular physicians all over the city of these employees as patients, as if they receive proper salaries, they should pay for medical advice just as other wage-earning citizens do. The physicians have been talking much over this vexed question *in camera*, but so far have not lifted up their voices in the market-place! However, the medical journalist, like the village blacksmith, can look the whole world in the face, trim a new quill and dip it in gall. It is whispered that soon a deputation of physicians will wait upon His Worship Mayor Shaw, and bring

these ideas clearly before him. Let us hope their plea may ere long be granted, and that the city employees may be free to pay, and individually select, their respective medical attendants from among the whole community of physicians, who are also, let the city fathers remember, residents, taxpayers and voters. W. A. Y.

A FEW BRIEF REFLECTIONS ON THE PATHOLOGY AND MORBID ANATOMY IN HERNIA OF THE ABDOMINAL CICATRIX.

The relative frequency of this unfortunate accident warrants something more than a passing notice of its pathology and structural anatomy.

In order to comprehend the factors, which lead to a yielding of the scar after an abdominal incision, we must first remember that the causes in operation are of two orders. The first, and no doubt those of paramount importance, are intrinsic or *pathologic;* the second are incidental, or *operative.* It therefore follows, that for the latter there is prevention or relief, while in the former the condition is beyond the reach of remedies.

Many inherit a tendency to hernia, which in its fullest sense must include every description of visceral displacement or ectopy, whether it be of the female genitals through the vaginal passages, or a bulging of the viscera through the abdominal portals; in others it is acquired.

The primary and principal anatomic changes here involve the ligamentous stays and supports, atrophy, degeneration and elongation of the mesentery and other supports, want of tonicity, want of contractility. Thus, for the falling uterus we anchor it against the abdominal wall or tether it up by an Alexander, when, the underlying condition being in no manner influenced by the operation, not only may the organ now descend again, but post-operative ruptures may follow through the openings made in the abdominal wall, a condition which Salter well observes, may be more troublesome than the state for which the operation was performed.

Secondly, the incidental causes are those dependent on the technic of wound management. If we could entirely dispense with drainage the tendency to yielding of the scar would be greatly reduced. The drainage tube enormously adds to the post-operative troubles of celiotomy, by favoring intestinal adhesions and leaving a weak scar.

Since operators have discarded it in all except septic cases, the number of eventrations has been greatly reduced. Surgeons are not agreed on the best suture for closing the incision, though, no doubt, that which includes all the investing layers and involves the least trauma is the most appropriate. In the meantime all jarring and commotion of the abdominal walls must be as far as possible obviated, as straining at stool, coughing, vomiting, etc.

The *morbid anatomy* of post-operative eventration is very similar to, if not quite identical with, that of umbilical hernia. These rarely have a peritoneal investment, and therefore, the omentum and intestines being neither limited nor protected by a serous envelope, wander far into the intermuscular spaces, becoming adherent to everything they touch. The portal of escape becomes larger and larger, and the mass becoming incarcerated in its new habitat can no longer be confined, nor its volume limited completely by truss pressure.

It is well to bear in mind that any operation on the abdominal wall, which involves a free division of the muscles, may be followed by hernia even though the peritoneal cavity is not opened: as in supra-pubic cystotomy, nephrotomy, the para-peritoneal ligation of arterial trunks, operations for perityphlitis or Alexander's operation on the round ligaments. T. H. M.

THE MICROBE OF RHEUMATISM.

Mr. Thiroloix reports in the *Annals of the Pasteur Institute*, November 1, 1897, p. 845, that he has confirmed the discovery of the microbe of acute articular rheumatism, made by Pierre Achalm. The latter published his first observations in 1891, describing an anerobic microbe, found at the autopsy of a man who had died of cerebral rheumatism. Since then, this micro-organism has been searched for and found in eight other cases. It has been obtained in two autopsies: four times it has been got in the blood taken from a vein of the arm unmixed with other organisms: and in two other cases it was accompanied by micrococci.

To cultivate blood drawn antiseptically from the fold of the elbow, it is sown on tubes containing pure milk or milk mixed with bouillon. A vacuum having been made in each tube the latter is placed in the stove. It takes from eight to ten days before Achalm's microbe is developed. It is a thick rod, somewhat like

the bacillus of anthrax. Its length varies, according to the medium in which it is grown. It is easily colored by the usual coloring fluids, and remains colored after Gram's stain. It is exclusively anerobic, and liquid media are more suitable for its growth than solids. Horse bouillon, particularly if deprived of air, is an excellent medium for its cultivation. When it is growing, bubbles of gas first appear; then a uniform disturbance of the fluid occurs, and later a whitish deposit is made. When sown in tubes of milk, this bacillus causes coagulation of the milk in from twelve to fifteen hours, and such a free evolution of gas occurs that the tubes may burst. Cultures on solid media are hard to get, and the resulting colonies are made out only by the microscope. The resulting bacillus is, however, more regularly shaped than the one got in the liquid media. An interesting point is, that the salicylate of soda prevents the development of cultures. The media in which the bacillus has vegetated soon becomes acid and unfit to preserve the vitality of the organism; but the latter may be preserved by the addition of carbonate of lime.

The guinea-pig best shows the reaction. Inoculated in the thigh, one of these animals died in from twenty to thirty-six hours, presenting at the seat of infection a large gelatiniform œdema, or a cavity filled with reddish serum, exposing the necrosed muscles. The pericardium contained a large serous exudation and sometimes false membranes: the pleura presented similar appearances, when the inoculation was made in the thorax. The specific bacillus is found in these fluids. Œdematous serum taken from a guinea-pig and injected into another guinea-pig caused the death of the latter from acute septicæmia in ten hours. The mouse is less susceptible than the guinea-pig. The dog has always proved refractory. The rabbit requires very copious inoculation.

By injecting the serum of a guinea-pig directly into a rabbit, without passing it through cultures, M. Thiroloix produced in the latter animal heart-complications, which have a striking resemblance to those observed in human beings affected with rheumatism.

At an advanced stage of the disease, association with other microbes is noted. It appears that the Achalm bacillus opens the way to secondary infections.

A similar observation to Mr. Thiroloix's was reported by Messrs. Triboulet and Coyon, at a meeting of the Paris Academy of Medicine, a report of which appears in *L'Independance Medicale*, November 24th, 1897. J. J. C.

TORONTO INSANE ASYLUM.

Until the year 1841 there was no provision whatever made by the State for the care of the insane in Ontario.

The insane were first confined in the old gaol on Toronto Street, then in the house on the corner of Bathurst and Front streets. Next they were housed in the Parliament Buildings, which in those days were vacant a greater part of the time owing to the Parliament of the Canadas sitting alternately in Toronto and Montreal year about. The insane of the Province were next confined in old King's College Building in Queen's Park, and until 1850 they were kept in the barracks at Malden near Amherstburg, and in the old hotel at Orillia. In 1850 the large buildings on Queen Street West, Toronto, commenced five years before, were finished, Mr. Howard, of Howard Park, being the architect, and from that time to the present this building has been used as a very efficient asylum for the insane. At one time they were brought here from all over the Province, but as the population grew thicker, the district was narrowed from time to time, until at present the Toronto Asylum only accepts free patients from the city and the County of York, though private patients still are brought here from all over the Province.

Dr. Rees was the first superintendent, beginning in 1841 with seventeen patients. In 1844 Dr. Telfer became the superintendent, and was followed in 1847 by Dr. Park, who held office for less than a year. Dr. Primrose gave place in 1849 to Dr. Scott, who was succeeded in 1853 by Dr. Workman, who acted as superintendent for twenty-two years. Dr. Gowan acted as superintendent for less than a year, and was followed by Dr. Daniel Clark, who has been the superintendent from 1875 until the present time.

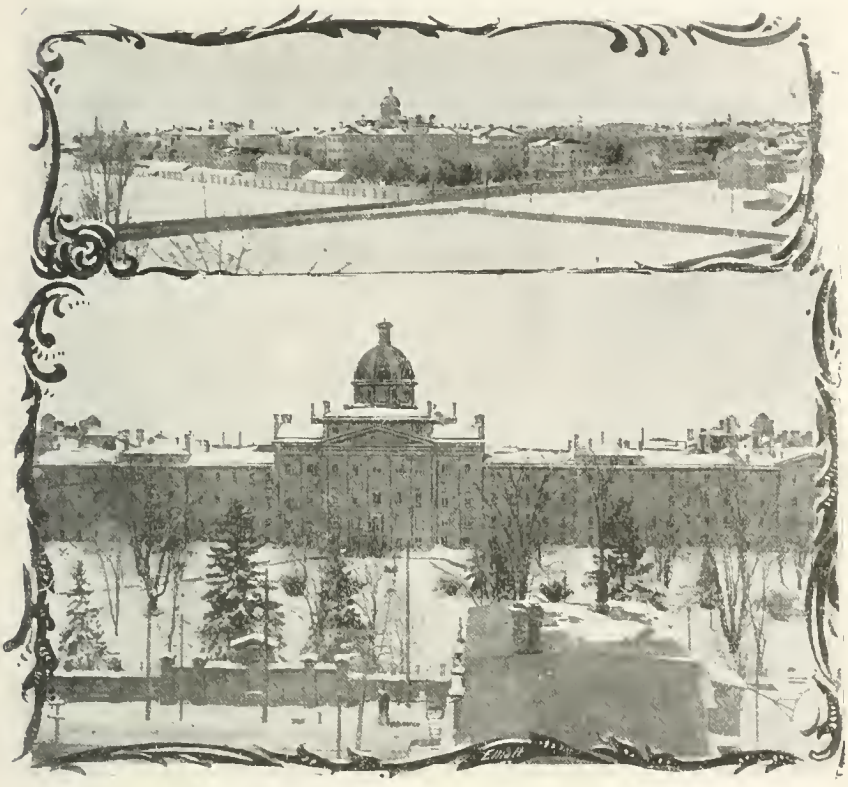
Many additions have been added to the original buildings, and though the grounds have been more than once curtailed, the extent of the accommodations has been repeatedly increased. There are fire-escapes and an efficient fire service, consisting of three large reservoirs, one with a capacity of 12,000 gallons in the main dome, filled from hydrants connected with the city power, and an ample supply of hose, besides a large number of chemical cylinders.

Excellent means are taken for ventilation. The laundry work and culinary operations are all conducted in separate buildings by improved machinery. Equal care is shown in the hygienic management.

No idiots or imbeciles are admitted. The treatment has changed radically in the last twenty years.

All restraint of any kind was abolished on the 6th of January, 1883, and the results have been in every way satisfactory. Going much further than this, it may be said that every effort is now made to amuse the patients and to render their lot an agreeable one.

To this end a library of 1,400 volumes has been collected, recrea-



VIEWS OF ASYLUM FOR INSANE, TORONTO.

tion grounds have been provided. In the summer, picnics, and in the winter numerous concerts and fortnightly balls have been devised for their diversion. There are also a number of work-shops, where, during the daytime, the patients may find wholesome employment, and where some indeed have learned a trade.

The following may be mentioned: The kitchens, the stables, the tin shop, the stove shop, the upholstering shop, the tailor shop,

the engineering shop, the blacksmith shop, the carpenter shop, the paint shop, the book-binding shop, the gardens, the sewing-room.

In this way perhaps 60 per cent. of the patients work at some occupation. A large number of them are very tractable and 160 are not kept under lock and key during the daytime.

There are two infirmaries for the care of the sick of both sexes, and each under the care of a regularly qualified nurse and distinct from the main building.

One hundred and ten are employed in the asylum and there are between seven and eight hundred patients.

The dietary and clothing have generally improved of late years. As few narcotics as possible are employed, the chief good being derived from sanitary measures and strengthening treatment—to build up again what has been worn out.

In spite of the large number of incurables admitted, the percentage of cures varies from 25 to 45 per cent. of those admitted during each year.

Medical men who have the insane in their care should urge early asylum treatment.

The asylum has an excellent mortuary where autopsies are frequently held.

It is generally to be desired that the name asylum, against which popular prejudice is very strong, should be changed to hospital.

In the Toronto Asylum for Insane there is a school for nurses where lectures are given by the medical staff every year. A class from the medical departments of the medical colleges of Toronto also meets here, the superintendent being Professor of Mental Diseases in Toronto University.

Clinical instruction is found much more satisfactory than theoretical in the study of nervous diseases. E. H. S.

TORONTO'S ACADEMY OF MEDICINE.

We hail with pleasure the recently circulated idea of establishing in this city an Academy of Medicine, by bringing about an amalgamation of all of our medical societies. Unquestionably, "in union lies strength." During the past few years there have been established in Toronto several societies for the discussion of subjects of interest to all practitioners, but the great objection to the larger number of these societies has been that they have been

started and maintained as close corporations, and to be admitted to membership has been, to say the least of it, not an easy task. Unfortunately there exists in certain sects of the profession in Toronto a spirit of cliquism, which is absolutely fatal to the fraternal spirit which ought to reign supreme, and we earnestly hope that by the establishment of an Academy of Medicine, of which all practitioners in good standing may become members and feel quite free to take part in the varied discussions, this spirit will give way to one which will have as its motto, "the uplifting of the profession and the good of mankind." W. A. Y.

UNION BY THE FIRST INTENTION IN LAPAROTOMIES.

This question, which has become of considerable surgical importance owing to the great number of operations done for abdominal diseases, was ably discussed from the standpoint of surgical pathology by Dr. Manley in the February number of this journal, and a second article by the same writer appears in the current number. An essay on this subject, written by H. Fritsch, from the standpoint of operative surgery, appeared in *Deut. med. Wochenschr.*, 21 October, 1897, No. 43, p. 681. The essayist contends that a surgeon desirous of obtaining union by the first intention in laparotomy incisions ought to attend strictly to the following rules:

1. The patient should be prepared more carefully for operation than is done at present. The preliminary bath should last at least half an hour, a kilogramme of carbonate of soda being placed in the bathing tub. Prior to the bath the abdomen and genital parts of the patient should be lubricated with soap. Compresses steeped in a bland antiseptic solution, intended to soften the scarf skin, are retained on the abdomen of the patient during the twelve hours preceding the operation.

Just before the operation is begun the skin is lubricated with soft soap, and, after being washed, it is shaved or rather scraped with a razor. This is followed by washing the skin with an alcoholic solution of soap, and finally with a solution of corrosive sublimate, 1-1000.

2. The edges of the incision should not be separated by the fingers. The fingers wound and tear the fat cells, and thus favor gangrene of the wounded parts. An abdominal retractor, made

with smooth borders, should be employed when inspection of the operative field is required.

3. Before beginning to introduce the sutures, all shreds or bands of torn or hanging cellulo-adipose tissue should be removed with the scissors. In a septic operation when pus has flowed over the edges of the incision, after the peritoneum is sutured, a superficial layer of tissue should be removed from both edges of the cut before they are united.

4. Suturing should always be done with a double thread running from the interior of the abdomen outwards towards the surface of the skin. If passed in the other direction, the needle may draw into the subcutaneous tissues, staphylococci, which are situated deep in the glands of the skin and which antiseptics cannot reach.

J. J. C.

IODINE IN TREATMENT—CHOICE BETWEEN THE IODIDE OF POTASSIUM AND THE IODIDE OF SODIUM.

A DISTINGUISHED clinician, M. Bricquet, in *La Presse Medicale*, 15 Janvier, 1898, indicates the classes of cases in which iodine should be used per orem, and also the preparation of the drug which should be used in each case.

In diseases of the circulatory apparatus iodine is useful in the greater number of cases of angina pectoris, arterio-sclerosis, aneurism, acute and chronic aortitis; it may also be useful in remedying circulatory troubles due to badly compensated valvular disease. In diseases of the respiratory organs the iodides are serviceable, particularly in the treatment of true asthma, in chronic cases of bronchitis due to la grippe, some cases of acute bronchitis, chronic bronchitis without expectoration, chronic pneumonia and pulmonary congestion. They may be useful in chronic coryza and ozœna.

As to infectious and parasitic diseases, medication by the iodides is of the greatest importance in syphilis and in actinomycosis. In the treatment of poisoning they are used in chronic poisoning by lead and mercury. The iodides have given the best results in the treatment of certain arthritic manifestations; in obesity, pains, sciatica. In surgery they may be used in cases of chronic arthritis, hyperostosis and iritis.

The iodides are useless in diseases of the digestive apparatus, liver and kidneys; in non-specific diseases of the nervous system,

in infectious diseases. Contrary to a rather common belief they have no action on the secretion of milk.

Should one prefer the iodide of potassium to the iodide of sodium or not? It is better to not be too exclusive in this matter, for each of these preparations has advantages and disadvantages. Speaking generally, one may say that the iodide of potassium should be preferred to the iodide of sodium, except in diseases of the respiratory passages and some cases of rheumatic pains. When the iodide of potassium is not well borne either at the beginning or during the course of treatment, one must fall back on the iodide of sodium, as the therapeutic value of the latter is but slightly inferior to that of the potassium salt.

In ordering a course of iodine it is always prudent to begin with iodide of sodium, which in general is better borne: when the patient is used to the drug the iodide of potassium may be substituted for the other. As after long use, the iodide of potassium has a depressing action, not caused by the iodide of sodium, it is advisable in cases of prolonged treatment to use the iodides alternately.

J. J. C.

FADS, FANCIES, FRUIT.

Few fads have proved fatal to their votaries, and some, at least, have produced good results. Americans would have been dead, buried, and waiting a final resurrection if all the "Sure Cure" fads had killed. Scotland has been almost cleansed by the regeneration of cold water baptism, still Hydropaths are many, and the slain are few. Cures have followed one another in rapid succession and although often in peril by fire, water, or famine, humanity has withstood all onslaughts, and if it were not for "heart failure," "appendicitis," or "one hour after a successfully performed operation," *obituarians* would fall short of a dignified excuse for bowing their victims off this mortal coil. The newspapers and several medical journals have been discussing the latest fad—The Fruit Cure.

Many "cure fads" have in a great measure relied for their efficiency upon some form of diet. In fact, during recent years dietetics has formed an important study. Many kinds of fruit are included in the *menu* of this new cure, which no doubt will meet with great favor. Ripe fruit is pleasant to look upon, agreeable to the palate, and so brings its own recommendation with it. Physicians have always recommended its use as an article of every-day

food, and so will certainly in very many cases be in sympathy with those who believe in its abundant use. The varieties of fruit are so many that it would be difficult to find a patient to whom some one kind at least might not prove beneficial. Grapes, for instance, favor the formation of fat, and to some extent exercise a salutary action on the nervous system. Strawberries are believed to improve a phthisical patient. Malic acid is found in apples, pears, peaches, gooseberries and currants, tartaric acid in grapes, citric acid in lemons and oranges. Some authorities claim that cherries are good food for maniacs. What was "The first in peace, the first

DR. R. A. PYNE
Recently Elected M.P.P. for East Toronto.

DR. SPENCE
Who Contested Toronto W. for Local Legislature.

in war, and the first in the hearts of his countrymen" thinking of when he applied his little hatchet to cut off this specific balm from the participants in the political arena?

To some extent fruit stimulates the secretions by virtue of the acid and essential oils it contains; it also acts as a blood purifier. Its nourishing properties, however, cannot be great, as the proportion of nitrogen and carbon is too low, and of water too high to be of much nutritive value. One class of our community will take kindly to the fruit cure. We refer to the little Tommy Tuckers, the agile fence-climbers who hold sunrise breakfasts in your garden

and mine. But alas, if they begin too early while the apples are still green, there may be an oft-told tale in the words:

"Tommy took a bite, and Sammy a chew,
And up to the angels their little souls flew."

W. A. Y.

"THE HABITANT."

Dr. W. H. Drummond, of Montreal, who is a member of the Medical Faculty of Bishop's College, Montreal, may be said to be the discoverer of the French-Canadian peasant—"the habitant"—for until he began to write his charming dialect poems nobody knew—nobody, at least, outside of the old Province of Quebec knew—what manner of man the French-Canadian farmer was. Dr. Drummond has now gathered together his fugitive pieces into a beautiful volume, which will be a source of real pleasure to anyone who has a feeling for the poetry of human nature. It is true that the poems are written in dialect, but the dialect is not difficult to understand, and the swing and lilt of the verse carries the reader over the obstacles which at first beset his path. The habitant, as we come to know him through Dr. Drummond's sympathetic verse, is seen to be a singularly simple and genuine character. He is not a scientific farmer, but he loves his Canadian home and has all the perseverance, industry, and thriftiness of his French forbears. He has something of the French gaiety of heart touched to a soberer note by the solemnity of Canadian forests and the immenseness of Canada's lakes and rivers. If he has a little of the Frenchman's love of politics he has something more than the average Frenchman's love of Nature, and enjoys his hard battle with the elements. One of the most charming set of verses in this volume is that which gives the peasant's estimate and picture of the character and life of "Ole Docteur Fiset," who has "got ninety year or so":

"But Docteur Fiset, not moche fonne he get,
Drivin' all over de whole contree;
If de road she's bad, if de road she's good,
W'en ev'ryt'ing's drown on de Spring-tam flood,
An' workin' for not'ing half tam' mebbe!

"Let her rain or snow, all he wants to know
Is jus' if anywan's feelin' sick,
For Docteur Fiset's de ole-fashion kin',
Doin' good was de only t'ing on hees min',
So he got no use for de politique."

We are glad but not surprised to learn that Dr. Drummond's volume has already met with conspicuous success. The copy before us is marked ninth thousand, and we understand that the sale is still rapidly proceeding. Dr. Drummond was recently entertained at supper by a number of medical friends in Montreal, and Sir William Hingston, who presided, expressed in a few felicitous words the justifiable pride at the distinguished position which the author has won for himself as the poet of Canada.—*British Medical Journal.*

THE EMERGENCY BRANCH OF THE TORONTO GENERAL HOSPITAL.

Dr. Charles O'Reilly recently visited the Emergency Hospitals in one or two American cities with the object of getting the latest "pointers" regarding this work. It is intended that there shall be established somewhere down in the heart of this city an Emergency Hospital, in connection with the Toronto General Hospital, where accident cases shall be admitted and temporarily looked after. This scheme will naturally divide honors. The management of St. Michael's have become possessed of the idea that, owing to its location, it should absorb all the emergency work. Such will not be the case, now that the genial "Charlie" is after their scalp. Look out for squalls. W. A. Y.

THE PROPERTY BABY.

A few weeks ago some of the medical men of our city received a ticket of admission to an Institute in New York where are being shown Infant Incubators "at work" (if we may so express it). We learn that this institution is carried on along scientific lines and upon a sanitary basis, consequently it should prove of interest and merit the approval of physicians. In London, England, so popular has the viewing of "Incubator Babies" become that 3,600 visitors gained admittance to an exhibition in one day. From a scientific standpoint, however, this exhibition at Earlscourt was a fittingly-conducted one. *The Lancet*, London, in commenting upon it editorially, deplores the fact that this success attracted the attention of public showmen, and they, without knowledge or care as to the intricate scientific problem involved, have started baby

incubator shows on the same principal that a season ago they exhibited "two-headed girls" and "fat ladies." How morbidly curious are the public of this country, also. Midgets, elastic-skinned persons, ossified men, anything in fact that veers a degree from the perpendicular, becomes of interest, and is viewed by all sorts and conditions of mankind.

The physician's interest in such anomalies may be dignified by the idea of gaining scientific knowledge, but the interest of the public is to a great extent begotten by a longing for a novel sensation or to gratify mere idle curiosity. As a means to an end the invention of the infant incubator is valuable, but when occupied it is hardly an object to make a public circus of—the frailty of human life.

W. A. Y.

JOSEPH O'DWYER, M.D.

It was with the most sincere regret that the medical profession all over the world heard of the death of Dr. Joseph O'Dwyer on the 7th day of last January. Dr. O'Dwyer had made a name for himself, which will be as lasting as that of Sir James Simpson, or even Jenner, by the discovery of the effects of Intubation. Many a life has been saved by his timely intervention, and many a now grown-up child can indeed call him blessed. Dr. O'Dwyer, whose portrait forms our frontispiece, was born in Cleveland, O., October 12th, 1841. Though part of his earlier life as student was spent at our own McGill University, the Doctor received the better part of his medical education at the College of Physicians and Surgeons of New York. He graduated in 1866. It was during his connection since 1873 with the New York Foundling Hospital, that he was afforded the opportunity for carrying on the principal part of his life's work. Dr. O'Dwyer died at fifty-eight years of age.

According to a newspaper report, Professor Schenck has sold the German rights to his book on sex-determination for $10,000, with the rights in England and the United States still to be purchased.

The first subscriber to the *Medical Press and Circular* was an Irish provincial surgeon. His name was entered as a subscriber in 1846, and from that date until the present he has never failed to pay his annual subscription fee.

The Physician's Library.

Orthopedic Surgery. By James E. Moore, M.D., Professor of Orthopedia and of Clinical Surgery in the College of Medicine of the University of Minnesota; Fellow of the American Surgical Association; member of the American Orthopedic Association; surgeon to the St. Barnabas Hospital; consulting surgeon to the Northwestern Hospital for Women and Children, to St. Mary's Hospital, and to the City Hospital, Minneapolis, Minn. Illustrated. Philadelphia: W. B. Saunders, 925 Walnut Street. 1898. Agents for Canada, J. A. Carveth & Co., Toronto.

The author presents this work "as a text-book for students and a ready-reference book for practitioners," and at once puts himself on good terms with busy men by stating that, "Instead of giving in detail every method of treatment that has ever been employed, only such methods are given as in the writer's experience have yielded the best results." It may fairly be said that this good intention is rigidly carried out, and the student will look in vain for descriptions of obsolete methods of treatment that have ceased to have other than an historical value.

The introductory chapter forms interesting reading. The scope of orthopedic surgery is touched upon; but in this connection the reader is apt to gather the impression that the author is rather inclined to extend the boundaries of this specialty beyond the limits which are considered its proper limitations by most practitioners. Reference is made to the fact that when the author graduated in 1873, Bellevue was the only institution in the world that had a special chair in orthopedic surgery, and the author predicts that the time is not far distant when no medical faculty will be considered complete without such a chair, and when this branch of surgery will be as well recognized as ophthalmology is at the present time. The common practice of general practitioners at the present date of sending orthopedic cases to the instrument shops for treatment is strongly condemned. "Those who have neither time nor inclination to treat these cases are no longer excusable for sending them to the instrument dealer, for worthy professional brethren are to be found who have given themselves special training in this branch and who are willing and anxious to assume the responsibility." A just comparison is made between the instrument maker who considers himself competent to treat orthopedic cases, and the prescribing druggist; the proper office of each is to fill prescriptions, not to assume professional management of cases.

The author's definition of an ideal orthopedic surgeon is, "He who exercises the greatest judgment in drawing the line between cases that require operation and those that do not; who is equally skilful, on one hand, in applying the knife, and on the other, in applying the proper apparatus, and who is without prejudice in either direction." In a few well-chosen sentences the history of orthopedic surgery is briefly referred to; and the introductory chapter closes with half a dozen pages in which the most salient points in regard to diagnosis, prognosis, prophylaxis, therapeutics, mechanical appliances and the employment of plaster-of-paris are happily presented.

In reading the book through one can hardly fail to be struck with the degree of success that has crowned the author's effort to make the work at once

brief and complete. It may be doubted whether any work of the same size could better realize this ideal. A good many sentences might, by some, be considered arbitrary; but these should rather be judged as utterances rooted in firm conviction and experience.

In a few particulars the work is disappointing. It is difficult to understand how an author whose views on most of the subjects discussed are fully abreast of the times, could give such a totally inadequate presentation of the subject of flat-foot. To say, "Many ingenious theories have been advanced concerning the cause of acquired valgus, but it is very evident that it is simply a breaking down of the arch of the foot" (p. 131), is not only a failure to recognize the true nature and extent of this very common deformity, but serves to direct attention to an element of it which is oftener absent than present, and is in nearly every case infinitely less important than another feature, namely, pronation, which is not even referred to.

The directions for treatment are equally inadequate: practically nothing is suggested beyond mechanical methods of supporting the arch: in some cases forcible correction under anæsthesia is advised. Not a word is said of the invaluable therapeutic resources afforded by gymnastics and by training the patient to use his feet to the best mechanical advantage, both of which measures are of much greater importance than the best mechanical or operative treatment in all but the severer cases; while as an important part of the successful management of the latter these measures are simply indispensable.

In the treatment of scoliosis the author very properly condemns the use of braces except in a few exceptional cases. It may be doubted, however, if his exceptions are well chosen. On page 44 we read, "These cases occur in young women who have soft bones, soft, flabby muscles, and who are growing tall very rapidly. In such cases it is well to make use of proper mechanical support until the bones and muscles have gained firmness and strength enough to do their work, and the patient has grown as tall as she is likely to." In the writer's judgment these are the very cases that demand treatment by developmental methods, and to postpone the employment of the methods until the patient is fully grown is to permit the escape of the golden opportunity for successful management.

But despite these and some similar defects the book can hardly fail to command the admiration of every fair critic. It abounds in terse sentences which bring into bold prominence many of the most important points in orthopedic surgery, presenting them in words sufficiently striking to compel the attention and impress the memory.

The book is well printed on good paper, neatly bound, and contains a large number of well chosen and clearly reproduced illustrations. H. P. H. G.

The American Year-Book of Medicine and Surgery, being a Yearly Digest of Scientific Progress and Authoritative Opinion in all branches of Medicine and Surgery, drawn from Journals, Monographs and Text-Books, of the leading American and Foreign Authors and Investigators, collected and arranged with Critical Editorial Comments by Sam. W. Abbott, M.D.; John J. Abel, M.D.; J. M. Baldy, M.D.; Chas. H. Burnett, M.D.; Archibald Church, M.D.; J. Chalmers Dacosta, M.D.; Louis A. Duhring, M.D.; Virgil P. Gibney, M.D.; Henry A. Griffin, M.D.; John Guiteras, M.D.; J. R. Tillinghast, Jr., M.D.; Thompson S. Westcott, M.D.; Howard F. Hansell, M.D.; Barton C. Hirst, M.D.; E. F. Ingals, M.D.; Wyatt John-

ston, M.D. ; W. W. Keen, M.D. ; Henry G. Ohls, M D. ; W. A. Pepper, M D.; Wardell Reber, M.D ; David Riesman, M.D.; Louis Starr, M.D ; Alfred Stengel, M.D. Under the general editorial charge of Geo. M. Gould, M.D. Illustrated. Philadelphia : W. B. Saunders, 925 Walnut Street. 1898. Canadian Agents, Carveth & Co., Parliament Street, Toronto.

So great and so rapid are the advances which are made from year to year in every branch of medicine, that it would seem to be impossible to keep quite abreast of the times without one renewing his knowledge from time to time by becoming a subscriber to such a magnificent compendium of the most recent facts in medicine as this year-book of Dr. Gould's. If the author never had his name connected with but this one work, he would have made a name for himself which would become world-wide. Medical literature has now grown to such proportions that it becomes quite a task for the physician of average means to know just where to best invest his money in order to get the biggest returns. Books are coming out almost daily on every subject, the majority of them having doubtless their good points, the trouble, however, being that they either consist of a series of volumes, which are too cumbersome for the busy physician to wade through, or else they are more in the form of a hand-book, where the description is, on the other hand, too limited. When, however, one can get each year a book of moderate size, and which is at the same time not too bulky, written by a man with the brain-power of George M. Gould, and with such a staff of contributors as those associated with him in the Year-Book, every line almost being re-written once in twelve months, it becomes almost a duty for the practitioner to, if necessary, deny himself otherwise and be the possessor of a work of which anyone may be proud. The Year-Book of 1898 is indeed a wealth of both medical and surgical literature, giving as it does an epitome of new and progressive truths for the past year. We would wish to specially refer to the excellence of the chromo-lithographic reproductions. They with the mechanical excellence of the work are of a degree of excellence not excelled in any literature. The book has 1,021 pages, which are devoted to not only medicine, surgery and gynecology, but also give the most recent information in dermatology, materia medica, pediatrics, pathology, physiology, etc. One of the most important points of the greatest worth in this year's volume are the editorial comments, which are bracketed. We might even say that the 1898 Year-Book is a library in itself.

The Practitioner's Hand-Book of Treatment, or The Principles of Therapeutics. By the late J. Milner Fothergill, M.D ,M.R.C.P., Physician to the City of London Hospital for Diseases of the Chest, Victoria Park Foreign Associate Fellow of the College of Physicians of Philadelphia. Fourth Edition, edited and in great part re-written by Wm. Murrell, M.D., F.R.C.P. London : Macmillan & Co., Limited. New York : The Macmillan Co., 1897. Canadian Agents, A. P. Watts & Co., 10 College St., Toronto.

The last edition of this work was exceedingly large, showing that the author's views on this subject met with the approval of the profession as a whole. Few practitioners there are to-day who do not know of Fothergill's "Hand-Book of Treatment," very many of whom have reason to look back to those days in their student life with the greatest of pleasure when they received their first practical pointers on Therapeutics from reading the earlier editions of this book.

Such progress has been made in this department of medicine since the death of Dr. Fothergill nearly ten years ago, that it became necessary to almost re-write it. This work fell to Dr. William Murrell, of London, and well indeed it has been done, that gentleman having been careful to retain to as great an extent as possible the original author's style and method of presentment. We cannot do more than recommend practitioners to purchase this the latest edition of Fothergill, as they may rest assured that in doing so they cannot misspend the small amount. It can be purchased from A. P. Watts & Co. at 10 College St., Toronto.

Outlines of Rural Hygiene. For Physicians, Students and Sanitarians. By Harvey B. Bashore, M D., Inspector for the State Board of Health of Pennsylvania. With an Appendix on the Normal Distribution of Chlorine, by Prof. Herbert E. Smith, of Yale University. Illustrated. Philadelphia, New York, Chicago: The F. A. Davis Co., Publishers. 1897.

A very useful book to any of the classes of persons mentioned above, but especially useful, we should think, to the large class of intelligent non-professional readers who live in the country, and who know little of the means by which disease is to be prevented.

The remarks on wells, cisterns and public water supplies are well put and practical. The same can be said of the chapter on the disposal of house wastes and sewage. The chapter on "The Soil," is probably the most interesting in the book, but Tharing's views on cellar construction are quoted with good effect. The curious fact mentioned about the presence of arsenic in the Forest Farm Cemetery Creek, at Buffalo, will not be very good news to our friends the embalmers, but may serve to hurry on the advent of formaldehyde as an embalming fluid. Ventilation and heating are rather briefly touched upon. The style is clear and simple. The author should try again and give his readers more matter. J. J. C.

A Clinical Text-Book of Surgical Diagnosis and Treatment. For Practitioners and Students of Surgery and Medicine. By J. W. Macdonald, M.D., Graduate in Medicine, Edinburgh University; Licentiate of the Royal College of Surgeons of Edinburgh, etc. With 328 illustrations. Philadelphia: W. B. Saunders, 925 Walnut Street. 1898. Canadian Agents: J. A. Carveth & Co., 413 Parliament Street, Toronto. Cloth, $5.00.

The study of surgery is truly a very wide field, and to be considered in detail would take up many volumes. The task of the author on such a subject is no small one, especially if he attempts to boil down his subject. To do so, however, and present to the reader the subject of surgical diagnosis in one volume is no easy task. Dr. Macdonald's work, as published, is one of exceptional merit, and puts into the surgeon's hands a work which will enable him to treat his cases in a manner which will do justice to his patient as well as himself. The work teaches the reader particularly how to examine a case of injury in a systematic manner, leaving nothing undone and guarding against all contingencies. The author excludes from the book the surgery of the eye, ear and skin, and leaves those subjects to the care of specialists. The work indeed presents the most recent surgical knowledge.

Elements of Latin. For Students of Medicine and Pharmacy. By George D. Crothers, A.M., M.D., Teacher of Latin and Greek in the St. Joseph

(Mo.) High School; formerly Professor of Latin and Greek in the University of Omaha; and HIRAM H. BICE, A.M., Instructor of Latin and Greek in the Boys' High School of New York City. $5\frac{1}{4}$ x $7\frac{1}{2}$ inches. Pages xii—242. Flexible cloth, $1.25 net. The F. A. Davis Co., Publishers, 1914-16 Cherry Street, Philadelphia; 117 W. Forty-Second Street, New York City; 9 Lakeside Buildings, 218-20 S. Clark Street, Chicago, Illinois.

This small book is one which is bound to prove useful to students of medicine and pharmacy, giving as it does in small space "those principles of Latin etymology and construction which are essential to an intelligent use of the terminology of pharmacy and medicine." It will most assuredly be the means of rendering much more simple the requisition of the Latin tongue so essential to correct prescription writing by which a physician is most apt to be judged.

The Care and Feeding of Children: A Catechism for the use of Mothers and Children's Nurses. By L. EMMETT HOLT, M.D., Professor of Diseases of Children in the New York Polyclinic, etc. Second edition, revised and enlarged. New York: D. Appleton & Co. 1897.

This small work contains a wealth of information in compact volume. It consists of a series of queries and answers on such important subjects as bathing, clothing, the airing of the nursery, ventilation, and, most important of all, infant feeding. The booklet should be in the hands of every mother as well as children's nurses.

PAMPHLETS, REPRINTS, ETC., RECEIVED.

Official Hand-Book of Information relating to the Dominion of Canada. 1897. Published with the approval of Her Majesty's Secretary of State for the Colonies, and by the authority of the Minister of the Interior, August 1897. Ottawa: Government Printing Bureau.

F. A. Davis & Co., of Philadelphia, Pa., expect to have in the hands of the profession, before many weeks, Sajous' "Annual and Analytical Cyclopædia of Practical Medicine." This work is one which will prove to the practitioner more than up-to-date. It will contain 500,000 words and will indeed represent a new era in medical literature. It is in reality a digest of the very latest literature on all departments of practical medicine, everything new up to within a few weeks being included in the book. We heartily recommend the work to the profession as being something of exceptional value.

Vital Statistics of Ontario. Report relating to the Registration of Births, Marriages and Deaths in the Province of Ontario, for the year ending 31st December, 1896.

A Modern Pathological and Therapeutical Study of Rheumatism, Gout, Rheumatoid Arthritis and Allied Affections. By EDMUND L. GROS, M.D., of the Faculty of Paris. New York: Morrison Print. 1897.

State Statistics. Twelfth Annual Report of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania. Volumes I. and II. Cloth, 8vo; pp. 547 and 647 respectively. Harrisburg: Clarence M. Bush.

THIRTY-ONE patients have been treated at the Pasteur Institute, of Baltimore, since it was opened last April.

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Original Contributions.

PERVERSION.*

BY EZRA HURLBURT STAFFORD, M.B.,

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PERVERSION implies a change of some sort, and usually in a bad or unfortunate sense; evolution, a long series of gradual changes. Any change, however, from that which is authorized and usual and in vogue usually meets with popular suspicion and disfavor. To use the word in the more scientific sense, however, it merely implies a change or a departure.

The term has recently been set aside by writers on mental disease to signify an apparent distortion of the sexual instincts; and the object of the present paper is to discuss how far these changes or perversions are really the result of disease, and how far they may be explained by the law of evolution—to what extent, in fact, they are purely morbid, and to what extent not.

Darwin and the school of writers which has gathered about him show plainly that evolution is a general law which can be very distinctly seen running through the whole history of animal and vegetable life. The law of degeneration and disintegration is equally obvious. The principle of perpetual change is not always, therefore, an unfortunate circumstance, but one of the laws of development.

There are, however, two distinct varieties of change—one peculiar to the processes of evolution, and one peculiar to the processes of disease. The changes which take place in evolutional development are, so to speak, homogeneous. They are changes in intensity—an exaggeration of a certain function which at first appears to partake of the nature of a deformity, or a decrease of a

*Read before the Toronto Medical Society.

certain function which also appears to partake of the nature of a deformity. The decrease sometimes goes so far as to leave nothing but the rudiment of what was possibly at an earlier period in the career of the species a very important organ or function. Conversely from the slightest nuclei in the animal organism, the most important functions have been known to develop with the changes in anatomical structure. There is also change in physiological action. The one implies the other. It will often be convenient to imply the anatomical change when only expressing the physiological change.

Evolution is a normal condition of life, and, therefore, the fluctuations in physiological action, provided they be merely a matter of greater or less intensity, are also a normal condition.

It is disease which accomplishes a change from one thing to another sometimes completely different, and the difference between the changes of evolution and of disease will be suggested in simple imagery by comparing an unusually developed muscle to a suppurating carcinoma. *En passant* it may be noted that some changes first produced by disease are afterwards retained, and, as it were, incorporated in the developing organism, which for long afterwards bears the vestiges of changes originally due to disease.

Without referring to the career of our own species from very early times, as not pertaining to this paper, the suppressed stadia of that career must be kept closely in mind, and also the tendency seen very clearly in individual members of the species to revert often to characteristics which had been very marked in some former stadium, but which at the time had almost entirely disappeared from the mass of the species. In other words, the long suppressed rudiment will in some isolated member of the species regain all its former strength. These are called reversions or survivals. Such instances very clearly point out how much the popular idea of proportion depends upon the momentary condition of the race.

In the eyes of our earlier progenitors we would appear physically as a race of monsters, hideously deformed, and beyond conception dreadful to behold. Our customs, too, would cause them utter repulsion, just perhaps as our customs or our habits of thought may in the future be regarded with repulsion by our remote posterity.

As our bodies and our mental qualities would be regarded with intense aversion both by the dim past and the dark future; as we are unpopular at both extremes, so it is only fair to say, we would ourselves shudder, I have no doubt, if we could obtain an intimate knowledge of what our race has been in the past or will be in the future. The dislike would be reciprocal in fact. This leads one to the conclusion that we do not like anything that is very much different from ourselves.

Much perversion is undoubtedly a survival of some earlier animal custom, to which the instincts of the individual revert, an instinct which lies latent in the mass of the species.

In illustration of this fugitive tendency in the race, a large number of cases have been recorded, and particular instances of such survival will probably occur to the minds of everyone. The writer has in mind an instance which illustrates the idea he desires to convey, in the case of a lady who is not insane or hysterical, and in whom, beyond a high nervous temperament and a few very private attacks of respectable alcoholism which culminated in delirium tremens, there is really nothing that may be regarded as out of the common. Early in life this patient began to experience a distaste for any stroking motion from the ends of the extremities upwards towards the hips or shoulders or upwards along the back and neck. To rub the arms in this way occasioned her intense misery, and she could not bear to do so herself, and made the lives of her intimates miserable lest they should do so accidentally. To rub or stroke her extremities in the opposite direction, however, occasioned her no inconvenience at all, nor was there present any hyperæsthesia of the cuticle. At first I was inclined to regard this as an obsession, but as there was nothing else in her case to bear out such an hypothesis, it seems to me that it is simply a survival of the hirsute animal which objects to having its hair rubbed in the wrong direction.

A careful study of animals in the wild and in the half-tamed state will cast a considerable amount of light upon those forms of perversion which may be scientifically regarded as reversions to a former condition in our career. An exhaustive collection of the facts would probably show innumerable survivals, often deeply buried in the anatomical structure and never observed, while sometimes so decided as to modify the physiological functions. These survivals pertain to every part of the organic structure, but a fixed tendency to indecency has led certain observers to make very extended collections of more or less authentic cases of survival which refer only to the sexual system. And many cases of sexual perversion may be set down as a reversion or a miscarriage in the chain of evolution.

On the other hand, many instances of perversion constitute an anticipation of a future condition. They are premature. That is, there is a tendency towards development in a certain direction, and in certain individuals the tendency is greatly in excess of that in the body of the race, and hence there is a lack of proportion in the individual not at all gratifying to the race, on the whole.

But if these changes, or instances of perversion, are merely of intensity, and if, when very carefully analyzed, and compared with the accepted normal standard, they contain no really new factors, they are not perversions in the strict sense of the word.

The perversions with which I have to deal are such as give evidence of some factors completely alien to anything which, as a race, we have felt, feel now, or are likely to feel. These cases of perversion form, not a distortion of a natural instinct, but an excrescence apparently completely foreign, and not so often of the

nature of a physical defect as of a mental aberration, and therefore a form of insanity.

Kraft-Ebing has gathered together a very edifying collection of such cases, which is likely to remain for a long time the recognized classic in that extremely odious department of human knowledge. Not so much does it bid fair to remain the accepted classic upon the subject because of its exhaustiveness and the ability shown by the author in that sort of thing, as because there are very few observers who aspire to becoming a rival in his "bad eminence."

Anyone desiring to pursue the subject may refer to Kraft-Ebing himself. I shall have nothing to say myself explicitly upon the subject, holding the belief that we may discuss pus in a general way and by the use of generalities (even laudable pus) without passing a phial of it around for everyone to examine. We all know what putrilege is without looking at it repeatedly.

Kraft-Ebing has not only performed a disagreeable piece of literary scavenging by writing a book which, I suppose, ought to have been written as a record of a human condition, and which perhaps no one else but he would write, even if they could; but he has also proved the benefactor of a very deserving class of the community, a class which many of the profession should regard with exceeding tenderness, inasmuch as they give them occasion to exercise the divine art, sometimes with very lucrative results. I refer to the prostitutes.

Kraft-Ebing has materially enlarged and amplified the armamentarium of the intelligent and progressive prostitute. No house of the sort should certainly be without a copy. It will aid this very deserving class in providing the unimaginative with somewhat stimulating novelties. This German author by collecting isolated cases of sexual perversion, and by putting his admirable work in the right place, may yet be able to flatter himself that he has rendered permanent that which was at first transient and accidental. As I said a moment since, the results of disease are often incorporated in the web of evolution, and having fallen into the current of health become a stable part of it, with results more or less deleterious to the ultimate history of the animal. Thus the industrious German not only provided science with a capacious reservoir of very interesting putrilege, but provided a class who have but few literary members with a system of philosophy. It has been appropriated by the courtesans. They find it a didactic work of many attractions. It is the bible of the bawdy house.

Really diseased forms of perversion, such as necrophilism and the like, may be congenital or acquired. The congenital pervert may be placed upon the same footing as the idiot and the cretin, and it is a noteworthy fact that forms of such perversion are not uncommon among these classes.

There are other forms of perversion again which occupy a peculiar place of their own in the lives of the nations—forms of

perversion long familiar to readers of the later classical writers, and which do not seem to have had a Hellenic origin, but to have been carried thither from the adjacent Asiatic races, and afterwards borrowed by the Romans at a considerable period before the decadence.

The case of Sardanapalus, according to present standards, affords a striking example of effemination, and yet by his contemporaries his peculiarities were viewed in an altogether different light. Even Plato speaks with smiling equanimity of the most preposterous relationships and associations as matters of every-day occurrence, and Virgil mentions without comment several cases revolting in the last degree to a modern mind. In the blithe Horace, also, many conditions of sexual perversion are archly referred to, as one might to-day jocularly refer to a friend's occasional addiction to his potations not wisely but too well. Yet these men of genius represent Rome at her best. Subsequent writers become intolerable, but one expects as much in an age which produced a Vitellius. These facts, however, serve to remind one that each civilization has its own usages, and these, when so common as to occasion no comment whatever by the purest and the noblest men of the time, would naturally not have been regarded by their contemporaries as a perversion of natural law. Reflections upon the matter are not pleasant, on the whole, but it seems only just to call attention to these facts, not so much in extenuation of practices for which the world of to-day feels the utmost repugnance, as by way of showing how widely racial instincts alter in the course of time and under the influence of changed ideals of morality. Yet even in Corinth a thoughtful man would have surely been forced to admit that these usages constituted a wilful and a mischievous trifling with the laws of nature. It would seem to follow that this tendency appears to belong peculiarly to periods of racial degeneration. But I will spare the reader the "modern instances."

The acquired form of perversion is found among the most degenerate. It is not necessarily associated with the criminal class *par excellence*, but is common to all forms of degeneration. In origin it is usually rather psychic than physical, and properly speaking comes under the study of the alienist rather than the surgeon or the physician.

Lombroso in his work upon "The man of Genius," referring to "the law of dynamism which rules the nervous system" says: "To an excessive expenditure and development of nervous force succeeds reaction and enfeeblement. It is permitted to no one to expend more than a certain quantity of force without being severely punished on the other side. Melancholy, depression, timidity, egoism are the prices of the sublime gifts of intellect, just as uterine catarrhs, impotence and tabes dorsalis are the prices of sexual abuse, and gastritis of abuse of appetite."

Hence, unusual use of an organ or a function tends within cer-

tain limits to increase the activity of the organ, even to exaggeration of its original activity. Beyond these limits it tends to distort the functions and ultimately to destroy the function altogether. Possibly some functions have fallen into a rudimentary state not through disuse, but over use and ill use.

The intensely artificial conditions of society at the present time, and the absurd and entirely unnatural basis upon which the sexual relation is now resting, has produced a condition of mind and a psychical posture towards the function altogether abnormal. The first results of this abnormal condition which has endured now for several centuries (but a short period in the life-history of our race) are the isolated cases of disease or perversion which we find about us. The very fact that such a gallimawfry of filth as Kraft-Ebing's book should be read, is a clear hint that the race has reached an abnormal condition. The social has been confused with the physiological. That is bad. The religious has been confused with the physiological. That is worse. These things may lead to the tragedy of our species.

In conclusion, it only remains to advert to a very common form of perversion affecting the psychic or the emotional nature. The religious instinct seems to be innate in the species, and, in one form or another, inevitably manifests itself in even the rudest communities. At a very early period in the world's history, however, one will perceive a certain confusion of the erotic instinct with the religious, and as a result many primitive religious rites and ceremonies are found to have been based upon animal love. Indeed, from the very earliest dawn of history up to a time comparatively recent, Phallic Worship was very common among all races.

The ecclesiastical rite of marriage, as it exists to-day, is doubtless the modern relic of an ancient symbol. Moreover, all the mysterious and dramatic incidents of the human life, as we will notice, are still a sacerdotal possession and presided over by the priest. But it was the early Christian Church which led, or more probably encouraged, the revulsion of feeling which the civilization of the time may have begun to feel against the sickening abuses of physiological laws; but the early Christians, instead of being satisfied with the beautiful simplicity of the Homeric period which would have been possible, aimed after an ideal almost grotesque in its impossibility and antagonism to natural laws. The suppression of the erotic instinct altogether was regarded as the great desideratum, and a large part of every religious tradition consists of a repudiation, as degrading and impure, of the ineradicable sexual instincts of the species. The results have been, I think, unfortunate.

An unconscious simplicity would, I think, have been better for the race than the morbid tendency to self-examination and dissimulation which the existing ethical fabric almost presupposes The neophyte, nursed upon a dogma which teaches him to regard with shame and fear the instincts which are the mainspring of the exist-

ence of the race, early strives to suppress every emotional impulse leading in that direction. A certain psychical perversion is the result, and the unhappy individual gives indirect vent to his natural physiological inclinations through an intellectual channel. The ecstasies of what is known as "conversion," and "sanctification," and "second blessing," are often nothing more and nothing less than a perversion of the erotic instinct, and a vicarious means of sexual gratification. A very striking peculiarity of such perverts is a tendency to lapse from the perverted manifestation of emotion to the natural expression of the same with almost explosive suddenness and frenzy, which shows that such perversions are merely a temporary makeshift of the cramped faculties.

A vast mass of evidence could be brought forward in proof of these statements, chiefly from the class of female celibates which, under existing traditions, is necessarily a very large one; and of this class not more from those who from accident, or choice, or religious scruples have remained in a state of celibacy from the first, than from those who have experienced the natural play of their functions for a time and have subsequently been forced, or found it convenient, to remain in a state of celibacy. Perhaps the most familiar example is to be found in the case of those who, upon the decay of the functions referred to, become perverted in the manner already described, and, having survived their energies, desperately try from mystical vigils and rites to extort from their waning existence an aftermath of emotional excitement. This tendency to perversion is facilitated undoubtedly by the symbolism of sex in constant use in the Christian as in all other religions. In this system of symbolism both sexes are represented, and upon these ideal types the pervert tenaciously fixes his thoughts: one figure being a paragon of manly virtues and the other the complete embodiment of feminine loveliness. Upon these poetic lay figures the mind of the religious pervert luxuriously battens.

Some forms of perversion are so preposterous as to suggest the advisability of placing the patient under proper control; but the majority of cases can only be regarded as personal idiosyncrasies and isolated indications of the insidious process of degeneration which is taking place in the inmost structure of modern civilization.

A MACHINE FOR MANUFACTURING PLASTER-OF-PARIS BANDAGES.

BY H. P. H. GALLOWAY, M.D.,
Orthopedic Surgeon, Toronto Western Hospital.

To those surgeons whose work requires the use of a large number of plaster-of-paris bandages it is a matter of considerable importance to be able to manufacture them with the least possible

expenditure of time, and also to be sure that the quality of the bandages shall be first-class.

The ordinary method of manufacture of these useful articles is very time-consuming, and the quality of the manufactured product is frequently so inferior as to be exasperating to a surgeon who knows what a really good plaster-of-paris bandage is.

The text-books direct that plaster-of-paris bandages should be made by sprinkling and rubbing the plaster into the fabric which is chosen as the basis of the bandage. This method is so exceedingly inconvenient, however, that a very brief experience with it drove me to seek a more satisfactory way. At first I tried the plan of using a broad-bladed knife with which the plaster was spread over the upper surface of the bandage material with one hand while the bandage was rolled with the other.

For the broad knife I soon saw the advantage of substituting a rectangular piece of wood or glass or metal, with which the excess of a small heap of plaster deposited upon the surface of a strip of bandage was scraped off as the bandage was rolled up, leaving just sufficient in the meshes to produce a good plaster

Fig. 1.

bandage. This was a great advance and for a time proved fairly satisfactory. But with further experience the advantage of having some kind of a frame to hold the scraper, leaving both hands free to roll up the bandage, became manifest, and the machine shown in the illustrations, Figs. 1 and 2, was devised to meet this indication.

It is an extremely simple and homely device, consisting of a piece of board about nine inches wide by two feet in length, with two metal sides, which in my own machine are made of aluminum. Riveted to each of these metal sides are two cleats with just sufficient space between them to allow the scraper to slide up and down easily. The cleats are not perpendicular but at such an inclination that the angle which the scraper forms with the wooden bottom is about 75° in front and 105° behind. (The front end is that which is farthest from the operator when the machine is in use.) A couple of screws are placed, one at each side of the board, with their heads barely projecting above the surface, in such a position that the scraper rests upon them, and a very small space is thus left between the lower edge of the scraper and the board. By

raising and lowering these screws the size of this space can be varied, and the amount of plaster left in the bandage as it is rolled up can thus be increased or diminished at will.

The end of the bandage material, of suitable width, is placed underneath the scraper, a heap of plaster is then deposited upon it, and both hands are left free to roll up the bandage, which is automatically filled with just a sufficient amount of plaster. By means of this apparatus plaster bandages can be made with very great rapidity, a dozen or more only requiring a few moments for their manufacture.

It has been suggested to me that an attachment something like that with which the ordinary roller bandages are made might be added to the machine described above, so that by means of a crank the bandage could be wound up. As I am well satisfied with the efficiency of the apparatus in the absence of this modification, and also feel reasonably sure that such an addition would only complicate an otherwise simple machine, I am indisposed to experiment with it any further.

The plaster-of-paris bandages supplied for the use of surgeons,

Fig. 2.

even in many of the hospitals, may well be unfavorably criticised by those who are in the habit of using the best in this line that can be produced.

The defects in them arise from several sources. Very frequently the quality of the plaster used is very inferior, with the result that it sets very slowly. This may be due to the fact that it was of poor quality when first purchased, or that it has been left exposed to the air in a damp place. The best kind of plaster for general use is what is known as dental plaster, and can be purchased from establishments for the supply of dental materials, or from large dealers, of reliable quality and at a reasonable price. When bought in the original barrel and kept in a dry room it seems to remain unchanged for many months.

The fabric used in manufacturing the bandages is hardly less important than the quality of plaster employed. The fault usually present in regard to this part of the bandage is that there is too much substance to it; it is not sufficiently light and open-meshed or it is too closely woven. After trying a number of materials, the very best that I have yet employed is what is known as book-

muslin. There are different qualities of this material, none of which, as far as I have had experience with them, make a very bad material for plaster bandages, and one must by experiment with different kinds find the quality which is most suitable for this work. The chief points to be held in mind in regard to this choice are, that the material be not very closely woven and that it tear readily without leaving ragged edges: and muslin meeting these requirements is not difficult to obtain.

Another fault with the plaster-of-paris bandages usually supplied, is that they contain either too much or too little plaster, usually the latter. When made in the ordinary way, by simply sprinkling and rubbing the plaster into the strips of material with the hand, it is almost impossible to have a uniform quantity of plaster in all parts of the bandage. It is customary in many hospitals for the nurses to provide "mortar" or "plaster cream" to be incorporated in the plaster dressing as the bandages are being put on; and at certain operations when I have brought my own bandages the nurses have manifested considerable surprise when told that mortar would not be required. As ordinarily made, with only the merest sprinkling of plaster within the bandage, the use of mortar is indispensable to secure a sufficient degree of firmness and rigidity to the dressing: but if enough plaster is rolled up in the bandage the use of mortar is entirely unnecessary: and made with the machine described above it will be found that an ordinary number of bandages without the addition of mortar will make a rigid and unyielding dressing, which will also be more durable and better in appearance than a dressing made with the help of mortar.

In exhibiting this contrivance to other practitioners some surprise has been expressed at the amount of plaster which is rolled up with the bandage, and some have even expressed doubt as to whether the amount used was not altogether too much. When it is explained, however, that the use of mortar is not contemplated when the bandages are employed this objection is readily overcome. However, by sinking the screws on which the scraper rests farther into the wooden bottom of the machine, the amount of plaster left in the bandage can be diminished if desired.

A number of machines have, I believe, been devised for the manufacture of plaster bandages. The one described in this article is presented as providing such desirable features as extreme simplicity, ease of manufacture, cheapness, freedom from liability to get out of order, and easy adjustment by each practitioner to his own requirements.

12 Bloor Street East, Toronto.

Dr. G. P. Sylvester has retired from the business management of the *Canada Lancet*.

Selected Articles.

THE FINANCIAL ASPECT OF MEDICINE.

"I heard the trailing garments of the night
Sweep through her marble halls."

And I let 'em sweep; for I was weary. My professional duties for the day had been onerous, and the princely remuneration therefor had been fifty-seven cents. The fifty cents I laid prayerfully aside for the foreign mission box, and invested the seven cents in "Old Virginia" Cheroots—you all know the flavor—ancient cabbage leaves, damaged hay seed, and other smells classified and unclassified. While the black and blue smoke wove fantastical wreaths about my pure, snowy brow, I seated myself in my office chair and read my mail. First, I scanned a sight draft from an instrument manufacturer. I should think that those literary critics who so loudly cry for brevity and perspicuity would shriek for joy at the sight draft as the model so long yearned for. The sight draft used to bring terror to my timid soul, and make me long for a lodge in some vast wilderness, in my first years of practice; but after a short practice in Aroostook—which in many ways is a great educator—I have learned that the true inwardness of the sight draft is that you pay whenever the bank cashier is lucky enough to get sight of you, so if you are a bit observant and get your eye on him first, the agony is indefinitely postponed.

The next was an epistle which roused my curiosity somewhat. It was from a book publishing concern. You all have met the representatives of these concerns and have been impressed with their intense yearning for our welfare. They make you feel that they, like us, are working only for the health of the world at large, and recognize in us their ideals as mediums through which they can work to advantage, so to speak. The forceful writer wanted to know if I supposed that they were in the publishing business for amusement. Now I had never devoted a heap of thought to the subject anyway, but had gratefully used all their previous duns to kindle my fire with, and had given them full credit therefor. Now, however, that the matter had been brought to my notice so forcibly, I resolved to devote some thought to it, and remit the curious publishers some of my opinions. The next missive had an effect which Ayer's Hair Vigor and several other infallible proprietory hair invigorators had signally failed in—it started the hair all over my head and also sent a delegation of shivers to play tag up and down my spinal column. This effusion was from my laundress, who informed me in her rude way that she should hold my latest edition of shirts until I paid my old bill. Good heavens! What was I to do? My last shirt—except, of course,

the one I had on—in the hands of that insatiate wretch, who, for a few paltry dimes would consign me to oblivion—without a shirt. How I regretted my recent extravagance! Fifty-seven cents might have temporarily placated my irate laundress and given me a lease of life. But, alas! it was too late! Rob a mission box I would not; and I shrank at the idea of offering her the rest of my cheroots in part payment of my bill. Sadly I turned to the rest of my mail, which proved to be a card from our worthy secretary asking me to write a paper on the Financial Aspect of Medicine—Great Scott! This was the very aspect I had been looking for for years. How did Bell know that I was as ignorant of finance as a babe unborn? It must be a rude joke or unfeeling sarcasm; and here I broke down and emitted a choking sob. How I longed for boyhood's joyous days when I bolted raisins and canned lobster without a thought of coming care, or of appendicitis or ptomaines; and when I didn't dwell within a half-mile of Dr. Boone, with his murderous array of knives and things, and his deadly curiosity to see how a man looks inside out. While my manly breast was struggling with sobs which were aching to be sobbed, my devoted wife, as usual, brought balm for my woe—this time in the shape of an "original package" carefully and ornamentally labelled "B. Varnish," which a friend from the city of Neal Dow had that day donated as a remembrancer. At once it occurred to me that for that peculiar roughness which grief produced in the pharynx and places, "B. Varnish" might have a very soothing effect, and as my remembrance of this friend seemed to need a little stimulation I concluded to bust the "original package." I didn't remember my friend much until I removed the cork, then my recollection grew vivid. In fact I never remembered a friend so long and so deep. I could hear his beloved name in every musical gurgle, and presently I could see his face in the very bottom of the bottle. Peace now spread her snowy wings above me; and relighting my cheroot I sent the curling incense up through her pin feathers with a calm and serene delight. How grateful to my hyperæmic palate was the flavor of that Old Rye, the most unique "varnish" I ever laid on or in for that matter. In fancy I could see the field in which that rye grew. I had forgotten all about my shortage in shirts and things, and was musing on the magic of rye. This rye must have grown in a great field beneath a bland, warm summer sky. I could see it, the tall shining heads nodding to the caresses of the soft wind; I could hear the low tremulous rustle, as if Ceres once more passed through the lane, trailing her regal robes on the rich young earth: I could hear the lilt of the merry lark as he soared high over the shining field in the fair, fresh morn; and I could hear the low, pleasant sound of the wind of the dewy eves billowing the luxuriant grain. About here I couldn't see or hear any more. I stopped smoking, but my cheroot stub fell on my trousers just above "Scarpas' Triangle," and kept on—smoking. I think I must have dreamed.

I seemed to be standing by a high and massive wall, in which was a wicket gate. Over the gate was an inscription, "Physician's Paradise." Seeing no one about, I tried the gate, but finding it securely fastened, I contented myself with peeping through. A goodly scene met my view. Broad, green meadows stretched away to a dim horizon line; and here and there gently meandering streams glinted through the verdurous trees that lined their banks. Beautiful villas dotted the landscape at intervals; and in the near background stood a well-built and prosperous-looking town. Now and then elegant equipages, such as favored city physicians drive, with liveried drivers and footmen, swept swiftly up and down the well-made highways While I was once more trying the gate in hope to gain admittance to this desirable country, a man of patriarchal mien, whom I at once conceived to be St. Peter, approached and accosted me gravely. "What seek ye here, my friend?" "All my life, reverend sir," I replied, "I have sought a physician's paradise, but, alas, in vain; now I would fain enter here." "Know ye the requirements of a physician's entrance here?" quoth he of flowing beard. "Alas! no," I replied, "but I think I can meet all you require, unless you want cash." He smiled somewhat grimly, I thought, and resumed: "This, good sir, is an intermediate stage of human existence to test the fitness of men, whether for endless joy or eternal perdition: you of earth sometimes call it 'Purgatory.'" "But why," I asked, "call it, 'Physician's Paradise'?" "Know, oh, curious mortal," he said oracularly, "that this land, though so fair to look upon, is a land cursed with malaria, and everyone here but physicians have the shakes. The class of people we have mostly here are those of earth, who never paid their doctor's bills. This serves a double purpose: It shakes the cussedness out of some, and all are punished by being obliged, by the law of the land, to employ a physician daily and to pay promptly. Some are too lazy to shake, and some are too mean to pay their doctor's bills, even to gain eternal bliss: and these we send to everlasting perdition." Having delivered himself of this explanation, the patriarch blew his nose vigorously and looked across the country musingly while I noticing a beautiful villa near by asked him whose it was. "That is Dr. Kilburn's, of Presque Isle. He is a hustler just as he was on earth. We are all pleased with him. He often says, 'Damn 'em! let 'em shake as long as the cash holds out.' Yes, we like him." "Is Dr. Boone, of Presque Isle, here?" I asked, thinking that on the compensation plan they might be partial to Aroostook doctors here. "No," he replied, shaking his head sadly, "Boone is a good little fellow, but he only charged a hundred dollars for a laparotomy and half the time he didn't collect that. No, Boone would ruin the purposes of purgatory in one week. We had to let him go where it is several degrees warmer than in Aroostook, and where he never will have to split kindling wood." With a sensation of collapse in my epigastrium, or thereabouts, I asked faintly, if Dr. McNamara, of Presque

Isle, had any show for entering the enclosure. How inscrutable was his wrinkled smile. "McNamara! an amiable sort of idiot. Ruined the morals of half Aroostook by his nominal charges and miserable failures in collecting. Why, every patient he ever had is in here shaking now. But, sir," looking at me keenly from beneath his thatched eyebrows, "who are you?" "I am McNamara!" "Hum," said Peter, "where is the costly mansion you erected for your widow and children while you were on earth." "Sir," I said humbly, "I never got money enough to build a henpen. I always boarded round."

Then seeing his eyes fixed thoughtfully on the ground, I resumed. "But surely my charitable deeds ought to count for something. I attended the widows and fatherless, and—" "Left your own beggars," savagely added Peter. "No, no, you can't come in here, you would only spoil our scheme: but I'll tell you what we'll do with you. You always meant well, no doubt, but it is all idiotie—this doctoring everybody for love, and beggaring your own family. Now we have a place for harmless, well-meaning imbeciles like you. Its a suburb of the Sulphur Mines, and if you don't mind a breach of ethics, I ll call Dr. —— Fitzgerald with his musical tandem to take you down free of charge, if you will buy six bottles of his Oxy-Vitalogen Cure at retail price." Just here that confounded cheroot stub woke me up to the fact that my best trousers would need a patch, and that a smootch of unguentine might gratify the cruel smart of my integument or cuticle, or something anyway that was smarting like fun. After I had rubbed my eyes a bit, it seemed to me that Peter also said something about having an ex-governor of Maine there, but I couldn't recollect what he was there for—not for non-payment of doctor's bills, of course: but it might have been for enforcing the Prohib—but, there! I don't remember, so let it go. Anyway it occurred to me that if I ever expected to get there to see him shake, I had better begin a reform in the matter of collections at once.

I cannot close this paper without giving a little gem from the late Poet Laureate which seems applicable to my subject:

WAKE, WAKE, WAKE.

Wake, wake, wake,
In the dead of the night, M. D.,
On boots while you cuss and mutter
For you know you won't get your fee.

Oh, well for the fisherman's boy,
That he knocks out his sister in play,
But rather than practise up here,
I toil for a sixpence a day.

And the measly beat sneaks on
With his unpaid doctor's bills;
And, oh, for a chance to cram his maw
With Oleum Tiglii pills!

—*Journal of Med. and Sc.*

INFLUENCE OF DRUG IMPRESSIONS—A STUDY IN MEDICAL EMPIRICISM.*

THE symptoms of diseases and their treatment have been narrated a vast number of times, perhaps too many. At the recent meeting of the American Medical Association there were more than 600 papers on the programme, representing the most positive proof of the empiricism of medicine. The mere presentation of such a list of essays at an annual meeting of one medical association means, if it means anything, that medicine is as far from a science to-day as it ever has been in its modern history. Now that the papers of that meeting appear from week to week in print, the search for something definite that will augment the cure of sickness is certain to provide readers, but is an application of what is read likely to benefit the sick beyond the helps employed last year or the year before?

Read them and decide for yourself if your experience in practical therapeutics needs any reminders of the hopeless confusion that reigns since the advent of excessive commercialism in pharmacy, and the birth of a new coal-tar derivative or serum cure for each new day of the year. The profession is kept in a ferment of experimentation at the instance of the industrious chemist and layman. The commendations of worthless drugs are planned and worded with all the conceivable art with which language abounds—practically the same art that is used to enhance the claims of such remedies as are advertised to the public through the secular press. And lately the proprietors have adopted a policy of working their wares at first upon the profession through the medical journals and then later upon the people through the religious and secular papers. The demand for advertising has become so important as a factor of journalism that quack nostrums are now admitted to the advertising pages of the medical journals.

It would seem but natural that ere long, through concerted action by an army of trained physicians, such perfection in the treatment of the sick could be obtained which would satisfy the public as well as justify the profession in their claim to the title of physician. The laity has looked and waited while the experiments have been taking place, covering hundreds of years, and directed by innumerable clinicians, ever hoping to secure perfection in therapeutic methods. The premature taking off of the patients illustrates too frequently how vain the search for success has been, either by the inaptitude of the average physician to comprehend natural method in treatment or by the blinded adherence to chemicals which are so generously recommended in the spurious literature of the advertiser.

* Elmer Lee, M.D., in *New York Medical Times.*

The reforms in treatment, so long as dependence is placed upon a belief in drugs to arrest and change pathologic conditions into normal health, will be slow, insecure and disappointing. The trial of drug remedies has included millions of instances and the time of the entire history of civilization. The failures to cure are strangely ascribed to the selection of the wrong drug or the improper dose, or some other incidental matter pertaining thereto which serves to defeat our expectations. Already the number of preparations devised by the chemist for the drug treatment of disease, according to good authority, exceeds more than 25,000 different remedies. The array of material from which to select is so great as to constitute a perpetual riddle in medicine. Individual judgment as to what remedy and in what dose will ever prevent, judging by analogy from the experience of the past, that simplification and approach to perfection of therapeutic method which is the desire of the age in which we live and the high need of the hour.

Were it possible for the profession to determine to its satisfaction the treatment of a disease so that it could be considered as settled, it could then turn its attention to some other medical problem, and, after its mastery, take up still others, and so on, until the entire list would be completed. A great many years in the professional life are wasted in efforts to master what are, after all, only the non-essentials.

Then, again, the influence of drug impressions upon the mind, from childhood to old age, interferes with fearless and original investigations in other directions of treatment, more simple and truer to nature. It seems to be as difficult to free the mind from the ancient, mediæval and modern beliefs, relative to the popular custom of trying to cure disease by the administration of drug substances, as it is to escape the doctrines of theology.

Dr. Wendell Holmes, in an address before the class of 1861, at Harvard Medical School, spoke the truth in his emphatic and epigrammatic manner as follows: "The disgrace of medicine has been that colossal system of self-deception, in obedience to which mines have been emptied of their cankering minerals, the vegetable kingdom robbed of all its growth, the entrails of animals taxed for their impurities, the poison-bags of reptiles drained of their venom, and all the conceivable abominations thus obtained thrust down the throats of human beings suffering for some fault of organization, nourishment or vital stimulation," for which remarks he came near to excommunication from the orthodox profession.

Confusion arises frequently when an attempt is made to discover the relations between cause and effect, so that it is never certain in the minds of those practitioners who depend upon chemicals for the cure of the patient, which is the symptom of disease and which that of the drug. Besides, the attempt to treat symptoms instead of conditions means much trouble for the physician and generally disaster for the patient.

There is widespread belief that it is necessary to change the

aspect of symptoms of disease by substituting a drug symptom, regardless of the vitality or the general effect upon the patient. For this purpose, a great variety of chemic depressants, excitants, irritants and obstructions are introduced into the human system, thinking that in some way, not very well understood, they contribute advantageously to the natural processes in their efforts to eliminate the cause of the disease.

Charles E. Page, a Boston physician, who is as much a master of practical therapeutics in the treatment of disease as was Dr. Holmes a natural autocrat in the philosophy of medicine, says in a recent communication that "Col. Ingersoll seems to stand precisely where we do as to orthodoxy, and his criticisms of theology and the supernatural would apply equally well to the popular theories of medicine. The literature on the value of water treatment, pure and simple, inside and out, and statistics of comparative death rate, and so forth, are ample and at hand for any inquirers, but the profession prefers to stick to the popular plan of treatment, while aware, as we are, that drug poisoning interrupts and protracts the recovery of the patient. But they are orthodox, misled every way, and the knowledge of natural methods does not penetrate the bomb-proof shell cast about them by the teaching of the medical schools."

In a recent letter from another discerning and successful practitioner he writes as follows: All the ills to which the flesh is heir can (if curable) be treated successfully by hygienic methods. When health is lost it is folly to complicate the case or render it hopeless by taking drug substances. It is worse than folly to surgically mutilate the body when there is not the slightest need. The life-giving agents which nature provides are intended for our use, in sickness as well as in health. They confer a twofold blessing; they keep us well so long as we use them properly; they also restore health when it is impaired. They do this without wasting the vital force and without injuring or destroying the constitution.

Why should a patient swallow a poison because he is ill, or take that which would make a well man sick? Such practice has neither philosophy nor common-sense to recommend it. In sickness the body is already loaded with impurity; that is why it is ill. By taking drug medicines more impurity is added thereby, and the case is further embarrassed and harder to cure.

Furthermore, he states: The judicious use of hygienic agents not only does away with drugging, but with the greater part of surgery. Were the practice of hygiene universal, health would be the rule and sickness the exception. Drugs as curative agents would scarcely be heard of; their uses would be in chemistry and the arts, where they properly belong.

The Hoosier farmer tells of the death of his wife; it is tender and pathetic and contains a moral beneath the homely phrases:

"Lived together forty year, sir,
Her an' me, come next December!

Never hed no trouble, neither,
Died, two year ago in August,
Hed the gripp, or somethin' like it.
Tuck a powerful sight of quine-ine,
And a heap of draps and powders,
And right-smart of other truck, too.
Nothin' seemed to do no good, tho'."

It would be but a brief day, if only natural agencies were employed in the cure of the sick, until the treatment of acute diseases would be established upon a plane of perfection equal to that of mathematics, to the dismay and dispersion of empiricism. It is my experience that, in order to comply with the preconceived opinions of the sick and their friends, drugs in some form are required, not that they exert a curative influence from a pathologic standpoint, but that they appease the patient and satisfy the expectations of the friends. It is nearly or quite as important to satisfy the friends as it is to treat the patient.

For the purpose of complying with the inexorable demand by the patient for medicine, be he "wit," "sage," or "imbecile," use is made of some favorite placebo. The beneficial effect of the placebo is enhanced by a "wise look" and explicit directions, as well as by a judicious make-believe medicine that has a proper tint of red, green or yellow.

In case of stomach derangement of recent date, a lady patient returned to me unexpectedly to say that by mistake she had taken an overdose of medicine, which had greatly alarmed her, and had produced, she said, a similar effect to that of too much morphine. She had been instructed to take one tablet at each dose, which contained nothing but one grain of sugar of milk, whereas the overdose, which had so alarmed her, consisted of two of these sugar of milk tablets. It was hard to keep my equanimity under this amusing circumstance, but the patient was sent away with the remark that she must be more careful in the future not to mistake or exceed the directions.

In another case a mother, whose child was under treatment, complained that the last medicine given her for her use was not entirely satisfactory. Her observation as to the effect of the objectionable remedy was thoroughly received, and tablets of sugar of milk, but of a different color, were substituted for those which had been unsatisfactory. The mother at the time of her next visit to me spoke in the highest praise of my skill in meeting the requirements of her daughter's case which had "baffled the efforts of the professors at the college."

The day is far away when the profession will be able to drop the mystic influences of potions and powders, draughts and placebos in general or special practice. Nevertheless the experience gained in the active work of the profession for many years has taught the valuable lesson of non-reliance upon drug therapeutics for the cure of the sick, much to my own satisfaction and to the rapid recovery

of the patients. A few chemicals have a proper place in the exigencies of the moment, for purely temporary use, but beyond this limit employment there is no physiologic justification for the introduction of drugs or serums into the human organism.

When the departure from the habit of prescribing medicines in the usual form and according to the prevailing popular notions of their utility was first made, it was with acknowledged fear and caution, because the milestones at that time were few and far between on this highway of treatment. The journey along the way since then has been made safe and agreeable by reason of the association with many wise and friendly masters of medicine whom it has been my pleasant experience to meet, and from whom both counsel and encouragement have been received.—*Med. and Surg. Reporter.*

DIPHTHERIA AND SCARLET FEVER: THEIR RESTRICTION AND PREVENTION FROM THE PHYSICIAN'S STANDPOINT.

BY CHARLES G. JENNINGS, M.D., DETROIT.

While mindful of the interests of the community, the family physician views the restriction and prevention of the contagious diseases to a large extent from the standpoint of the infected household. He sees as no one else can the mental, physical and financial distress that is brought into a family by the invasion of a grave contagious disease. In this emergency it becomes his duty to give medical aid to the infected patient; to prevent the extension of the disease within the household: to act as counsellor and advocate to the family in its quarantine relations with the sanitary authorities and the public: and lastly, to aid the sanitary authorities in all reasonable and just efforts to restrict the spread of the infection.

From this standpoint this paper will consider the prevention and restriction of scarlatina and diphtheria.

The germ of scarlatina has not been isolated. Our knowledge of its life-history has been gathered from clinical studies of the disease as it appears in man.

The facts that guide the prevention of the disease are:

The short period between exposure and the development of the disease—the period of incubation. This is on the average from three to five days: very rarely seven days.

One attack usually gives immunity through life.

Compared with measles and small-pox the susceptibility of children to scarlatina is not great. Approximately one-half of the children exposed take the disease. After the tenth year susceptibility rapidly declines. Approximately one-twentieth of the adults exposed are infected.

The striking distance of scarlatina is short—but a few feet. To contract the disease a susceptible subject must come in close contact with the infected individual or article.

Scarlatina is very feebly contagious during the period of invasion—that is, before the development of the rash; most contagious during the period of eruption; mildly contagious during the period of desquamation or scaling.

The germ of the disease is not propagated outside the infected individual. Technically the germ is an obligatory parasite.

It is not readily dissipated by exposure to the air as is the germ of measles, for example, but it is very tenacious of life and clings with great pertinacity to infected individuals, apartments, and articles of clothing and furniture. Without thorough disinfection an apartment and its contents may remain a source of infection for months.

Scarlatina is carried with great facility by a third person. The utmost care is demanded from those who are compelled to come in contact with the infection.

The duration of the contagious period is variable. From four to six weeks—that is, to the end of the period of desquamation—is the period usually accepted. This period may be materially shortened in mild cases by careful disinfectant bathing during convalescence, and is sometimes indefinitely prolonged by complications. Four weeks is the minimum time limit adopted by the local health board.

With the knowledge of these facts the prevention of the disease by isolation and disinfection becomes only a question of detail.

Because of its very limited range of action, the immunity of adults and many children, the abruptness and violence of its early symptoms, and the promptness with which it can be recognized, it is the most easily controlled by modern sanitary methods of all the acute infectious diseases. Its control may be considered as a test of the efficiency of the sanitary methods of a community.

Diphtheria is caused by the Klebs-Loeffler bacillus. Our recently acquired positive knowledge of the life-history of this organism, its mode of action, and its methods of distribution, together with the production of artificial immunity by antitoxin injection, have made diphtheria a disease in which the possibilities of preventive medicine are most gratifying.

The facts that guide prevention of diphtheria are:

The short period of incubation: from two to five days.

One attack does not give a lasting immunity.

Children are more susceptible than adults. No age, however, is exempt.

Close contact with a patient or infected article is necessary for the communication of the disease.

The secretions from the seat of membranous exudate, usually the nose and throat, are the carriers of the contagion.

Direct infection is the usual method of communication of the

disease. Direct infection may occur from persons convalescent from diphtheria whose throats still contain virulent bacilli. How long such throats retain bacilli is uncertain. They have been found two weeks and longer after the disappearance of the membrane.

Direct infection may also occur from persons suffering from a mild form of the disease which is not recognized as diphtheria.

Virulent bacilli may lurk in the throat and nose of a person who may directly infect another without suffering from the disease himself.

Indirect infection may occur through a third person, or from clothing and other articles that have been in contact with a patient. As a matter of fact, however, infection through a third person, except one who has been in close and prolonged contact with a patient, is not common. As compared with scarlatina and small-pox the danger of communicating diphtheria in this way is insignificant. The popular mind has unduly exaggerated this danger.

Very briefly stated, these are the main clinical facts that guide the physician and public sanitarian in their efforts to restrict the spread of these contagious diseases, and were they able efficiently to execute well-known sanitary methods, scarlatina almost certainly, and diphtheria probably, could be made as rare in our community as is small-pox. They would prevail as this disease does, only at times when centres of infection are imported into our midst. That these diseases are frequent is not the fault of medical and sanitary science, but the fault of those whom science seeks to protect. The community persistently refuses to be protected.

It is unnecessary to consider the details of practical sanitation as applied to these diseases. The principles are: perfect isolation of the infected person during the whole of the infectious period; and thorough disinfection of all persons and things that may be the carriers of infection from the sick to the well.

In the case of diphtheria, however, medical science in the last few years has added to its weapons of defence a remedy and preventive of such far-reaching influence that in its life-saving power it can justly be classed with preventive vaccination for small-pox. I refer to diphtheria antitoxin. With it as a curative agent we have here nothing to do. Its remarkable powers as shown in hundreds of thousands of cases have put that beyond question. As a preventive against diphtheria it is not as yet so thoroughly appreciated. Abundant experimental and clinical evidence has been accumulated to show that antitoxin administered to persons exposed to diphtheria confers an immunity lasting from three to six weeks. The experience of the New York Board of Health shows that at the end of this period about one in a hundred of those exposed develops a mild attack. Of 17,000 exposed persons immunized in this way, but two have died. Immunized children, however, while proof against contagion themselves, may carry it to others.

As vaccination does in small-pox, so antitoxin injection should

go hand in hand with isolation and disinfection in the prevention of diphtheria.

To return to isolation and disinfection. Simple as this may seem, the practical difficulties attending it are at the present time often insurmountable.

The relative efficiency of methods of isolation and disinfection, and the difficulties encountered in executing them, can perhaps best be brought out by considering the methods adopted by the health officials.

Upon notification of the existence of one of these diseases the Health Board through its inspector placards the house, distributes circulars of information to the householder and neighbors, and instructs the family in the regulations of the quarantine. From time to time the inspector visits the house to observe the efficiency of the quarantine and to supply the immediate needs of the isolated household. At the termination of the isolation period, the disinfector burns a few pounds of sulphur in the infected apartment, with precautions to insure as far as possible the exposure to the disinfectant of all infected articles, removes the placard, and the quarantine is ended.

While the Health Board does all that public sentiment of the present time permits, it must be seen from the above that practically all it does is to warn the community of the presence of the contagious diseases and admonish the infected household of its duty in aiding to protect the community from the spread of the infection. The details of isolation and disinfection—and upon these the whole structure of prevention rests—are carried out by the physician, the nurse, and the members of the household.

But little experience in the care of contagious disease is necessary to appreciate the multitude of detail that is essential to the establishment of the perfect isolation, and to the maintenance of the continuous disinfection that constitutes efficient sanitation. To ensure this demands a house of sufficient size to permit the isolation of the patient, the liberal attendance of the physician during the whole of the isolation period, the constant attendance of a skilled nurse or intelligent relative, and a domestic service ample to supply the many needs of the sick-room. Such conditions can be filled only in the homes of the well-to-do, and from an ample observation the writer can say that the sanitation in contagious diseases among the intelligent people of this community is as near perfect as it can be made. Extension of the disease beyond the confines of these houses is very rare.

In the habitations of the lowly, to carry out the essentials of infection control is too often impossible. As all who are in a position to know will testify, isolation here is a farce and disinfection a fetish.

These people object, and justly, to quarantine that cuts off a family from all outside communication for a month or more. The wage-earner must be confined with the rest, and such a period of

enforced idleness may bring upon a household a financial distress that months of steady and patient toil will not lift. An opulent community has no right in equity or morals to demand such a sacrifice on the part of one of its humble and unfortunate members for its own protection. No one realizes this better than the health authorities, and they are compelled to permit a laxity in the enforcement of the quarantine regulations that renders them practically useless.

The problem of the control of scarlatina and diphtheria, then, is not one that can be settled by more policemen and more sulphur. If it wishes to still further restrict these diseases the community must adopt some plan that will restrict, and place the burden of its maintenance upon those whom restriction benefits.

In his last annual report the able and efficient health officer of Detroit, recognizing the difficulties of practical sanitation in the tenement houses, makes a strong plea for the adoption of the cottage-of-refuge system. In the opinion of the writer this is the only method of control of scarlatina and diphtheria among the poor that offers any reasonable prospect of success. Just what the details of such a system shall be is not for us to consider at this time. Whether on the hospital or cottage plan, it should be a place of refuge where the unfortunate subject of contagious disease shall receive the proper care during his illness, under the guidance of his own physician, and attended by his own nurse or relative; where the case of uncertain diagnosis shall not be in danger of certain infection; and where the convalescent, during a prolonged detention, shall not be exposed to the many secondary infections that infest a crowded sick-ward.

Such a refuge, removed from the possibility of political control, considerate of the rights of the private physician, and of the unfortunate patients, would efficiently protect the community.

Such a plan, I believe, would receive the hearty support of the medical profession. In this, however, as in every extension of its authority over communicable disease, the Health Board encroaches upon the province of the family physician. In the interests of the public health the physician has sacrificed much, and is ready to sacrifice much more. But the health authorities should move with caution, and displace the physician as medical adviser only when the evidence is most certain that the salaried, impersonal public official can accomplish more than the interested, conscientious physician.

The tenement districts and the closely packed and unhygienic homes of the poor are, then, the resting and breeding places of diphtheria and scarlatina. Isolation there is impossible and disinfection impracticable: and until the community sees fit to establish some improved system of dealing with contagion as it there exists, these diseases will continue to steal from these haunts to strike down the cleanly, the provident, and the intelligent.—*Medical Age.*

Proceedings of Societies.

TORONTO MEDICAL SOCIETY.

THE regular meeting was held March 3rd, 1898, in the Council Buildings. Dr. T. F. MacMahon presided. The minutes of the last meeting were read and adopted.

Dr. Hay presented a fibroid of the uterus with appendages, which he had removed recently. The patient was aged 43, had been married a few years and had had no miscarriages. During the last six years she had suffered from profuse menstruation. During the last three months there had been an almost constant flow: she had an abscess of the lung and asthma, but took the chloroform well. The stump was treated by the extra-peritoneal method with a serre-nœud. The case was doing well.

Dr. Oakley reported a case of diabetes, in which he had used dietetic treatment and the various drugs recommended for the disease, with no amelioration of the symptoms. The woman had a diabetic family history and suffered from the classical symptoms, including pruritis vulvæ. For this he used with good effect permanganate of potash solution, two or three grains to the ounce.

Dr. H. H. Oldright reported a case in which slight boiling of the urine brought out the characteristic color. He referred to the treatment recommended by an Italian writer, who advises the use of a vegetable and fruit diet.

Dr Carveth referred to a case in which it was necessary to boil five minutes before the characteristic reaction was brought out. He reported the case of a man he was keeping on diabetic diet, who got tired of his restrictions and went to the Christian Scientists, who allowed him to partake of what he liked. He soon died as the result.

Dr. Graham Chambers held that Trommers' test alone for sugar was insufficient. The Fehling and the Bismuth tests should be made as well, and the specific gravity determined before deciding on the presence of sugar; for the presence of urates would give the characteristic sugar reaction. Again, sometimes when the liquor potassæ and the copper sulphate have been added to diabetic urine a precipitate does not readily fall. But if only a drop of the copper solution be added, one gets the precipitate much more readily.

Dr. Carveth said he had observed the precautions Dr. Chambers had reverted to.

Dr. MacMahon reported a case of cerebellar tumor. Some two years ago the patient had suffered from trouble with her stomach, accompanied with severe headache and dizziness. Later the eyesight became impaired and constipation marked. Pulse rate 84. Muscular power was distinctly less in the left leg than in the right.

There was marked optic neuritis, followed by complete blindness. Large doses of iodide of potash were given, but the patient did not improve The patient died. Her attendant at this time secured a post-mortem and sent the specimen which Dr. MacMahon presented. The tumor (probably a sarcoma) involved the right and middle lobes of the cerebellum.

Dr. R. A. Reeve said he had examined the case in the hospital and found double optic neuritis, but he could not recall the data. Double optic neuritis occurs in the great majority of cases of coarse brain lesions, notably in lesions of the cerebellum. The importance of using the ophthalmoscope could not be dwelt upon, despite the fact that there are a few exceptions to the general rule. Dr. Reeve reported on the condition of the fundus of the eye. There was a well-marked papillitis. This was usually a symptom in such tumors, although there were exceptions.

Dr. Parsons, who saw this case, made some remarks on its clinical aspects. He gave an explanation why there was weakness of the limbs on the same side as the tumor, viz., an implication of the fibres (described by an Italian observer) which pass from the corpus dentatum across and exert a sort of controlling influence on the motor area of the opposite side.

Dr. Wm. Oldright reported a case of four months' duration in a woman from whom he had removed a carcinoma of the breast. Two tumors were found in the cerebellum, one one and a half inches in diameter, the other somewhat smaller.

Dr. Stafford read a paper upon melancholia, in which he carefully outlined the clinical history of the disease, and pointed out the bearing which it has upon general constitutional disorder. The course of the symptoms through the various stages of the malady were followed, and the treatment at present in vogue was referred to. Great accentuation was laid upon the risks from suicide and the advisability of confinement in an institution.

This paper was discussed by Drs. Oakley, H. H. Oldright, Wm. Oldright and Webster, Dr. Stafford closing the discussion.

THE INTERNATIONAL ASSOCIATION OF RAILWAY SURGEONS, 1898.

The following are the names of officers of the International Association of Railway Surgeons for this year: President—Surgeon Geo. Ross, Richmond Va.: Vice-Presidents—Surgeon J. A. Hutchison, Montreal, Canada: Surgeon A. L. Fulton, Kansas City, Mo.; Surgeon De Saussure Ford, Augusta, Ga.; Surgeon John J. Buchanan, Pittsburg, Pa.; Surgeon H. L. Getz, Marshalltown, Ia.: Surgeon R. R. Lawrence, Hartford, Mich.: Surgeon W. Q. Marsh, Sierra Mojada, Mexico; Secretary—Surgeon Louis J. Mitchell, Chicago, Ill.: Treasurer—Surgeon Eugene R. Lewis, Kansas City, Mo.:

Executive Board—Surgeon A. I. Bouffleur, Chairman, Chicago, Ill.; Committee on Transportation—Surgeon W. B. Outten, Chairman, St. Louis, Mo.; Local Committee of Arrangements—Surgeon B. L. Riordan, Chairman, Toronto, Canada.

The meeting will be held in Toronto on Wednesday, Thursday and Friday, July 6th, 7th and 8th, 1898. These dates have been decided on so as not to interfere with other important medical meetings in United States and Canada; also because the weather will be very warm in the country to the south of us about that time, so we may expect a large number of members to come north and enjoy with us the cool breezes of Lake Ontario.

This will be the eleventh annual meeting, and it is the first time the convention has been held outside the borders of the United States. Other places where meetings have been held are: Chicago, Detroit, St. Louis, Omaha, Galveston and Old Point Comfort, Va.

The purposes of the Association are stated in Article 1, Section 2 of the Constitution, viz.:

"The object of the Association shall be to promote acquaintance and fraternal relations among railway surgeons, to secure interchange of ideas and the adoption of the best methods of development and improvement of railway surgery, and to establish it as a special branch of the chirurgical art."

At present there are about six hundred members paid up for this year, but many join at each meeting; as an instance, at Galveston we had between eleven hundred and twelve hundred present. Canadian railway surgeons have not been very numerous at the meetings of the Association heretofore—about forty being the largest number during any year—but we expect to have the support of all Canadian surgeons connected with the various railway systems of this country at this the first Canadian meeting. We will have representatives from all important railway centres from Halifax to Vancouver.

Free transportation will be granted to members of the Association connected with railways to and from Toronto upon application through the proper officers of the Company employing such surgeons. C. M. Hays, Esq., General Manager of the Grand Trunk Railway system, has kindly signified his desire to give an excursion to the members attending the Association meetings, from Toronto to the Muskoka Lake district. This excursion will probably take place on Saturday, the day following the closing of the meeting.

Other entertainments of a social nature are being arranged for.

The Chairman of the Committee of Arrangements would be pleased to hear from any Canadian railway surgeon who would favor the meeting with a paper.

Application blanks for membership will be forwarded by the Treasurer of the Association, E. R. Lewis, Kansas City, Mo.

The President suggested the subject of "Shock" for the special consideration of the coming meeting. Different aspects of the

subject will be presented by members already chosen by the President.

A daily journal, *The Railway Surgeon*, will be published during the meeting.

An exhibition of surgical appliances and physicians' supplies generally, will be a feature. At Chicago last year thirty-nine manufacturers had exhibits, some firms having four or five representatives present to show their goods. The duty being now removed from surgical instruments should insure a large show of these goods by foreign manufacturers.

The Executive Board of the Association includes: J. B. Murphy, of Chicago (who introduced Murphy's button); J. N. Jackson, Kansas City; W. B. Outten, St. Louis; J. A. Duncan, Toledo; J. H. Letcher, Henderson, Kentucky; A. I. Bouffleur, Chicago; Frank Lutz, St. Louis.

The Local Committee of Arrangements is in course of formation.

THE AMERICAN MEDICAL ASSOCIATION: SECTION ON MATERIA MEDICA AND THERAPEUTICS.

THE following papers and discussions have been promised for the meeting at Denver, Col., June 7-10, 1898:

"Yellow Fever: Its Etiology and Treatment." Discussion by Surgeon-General George M. Sternberg, M.D., of Washington, D.C.; Prof. John Guitéras, M.D., of Philadelphia; Sollace Mitchell, M.D., of Jacksonville, Fla.; T. S. Scales, M.D., of Mobile, Ala.; G. B. Thornton, M.D., of Memphis, Tenn.; H. M. Bracken, M.D., of Minneapolis, Minn.; P. E. Archinard, M.D., of New Orleans, La.

"Aims of Modern Treatment of Tuberculosis." By Prof. Edwin Klebs, M.D., of Chicago. Discussion by Charles Denison, M.D., of Denver, Col.; C. H. Whitman, M.D., of Los Angeles, Cal.

"Serum Therapy of Tuberculosis." By Prof. S. O. L. Potter, M.D., of San Francisco, Cal. Discussion by Prof. James M. Anders, M.D., of Philadelphia.

"The Therapeutics of Pulmonary Phthisis." By Paul Paquin, M.D., of St. Louis, Mo.

"Tuberculin as a Diagnostic and Curative Agent, with Report of 250 Tubercular Cases Treated." By C. H. Whitman, M.D., of Los Angeles, Cal.

"The Practical Value of Artificial Serum in Medical Cases." By P. C. Remondino, M.D., of San Diego, Cal.

"The Use of Remedies in Diseases of the Heart and Blood-vessels." By T. Lauder Brunton, M.D., D.Sc., F.R.S., London, England.

"The Mescal Button." By Prof. D. W. Prentiss, M.D., of Washington, D.C.

"The Modern Intestinal Antiseptics and Astringents." By William Frankhauser, M.D., of New York.

"To What Extent is Typhoid Fever Favorably Modified in Its Course, Duration, Termination or Sequelæ by the Administration of Drugs." By Frank Woodbury, M.D., of Philadelphia, Pa.

"Strychnine." By J. N. Upshur, M.D., of Richmond, Va.

"Methods of Teaching Materia Medica and Therapeutics." By Prof. G. H. Rohé, M.D., of Baltimore.

"The Study of Materia Medica and Therapeutics." By H. M. Bracken, M.D., of Minneapolis, Minn.

"The Great Therapeutic Importance of a Rational Adaptation of Cathartic Remedies to the Physiological Functions of the Gastro-intestinal System." By E. D. McDaniels, M.D., LL.D., Mobile, Ala.

"Why the Pharmacopœial Preparations Should be Prescribed and Used by the Profession." By Leon L. Solomon, M.D., of Louisville, Ky.

"The Use of Electricity by the General Practitioner." By Caleb Brown, M.D., of Sac City, Ia.

The following have also promised papers, subjects to be announced very soon, together with the day assigned for each discussion and paper:

Dr. J. E. Atkinson, of Baltimore, Md; Dr. Henry Beates, of Philadelphia, Pa.; Dr. T. M. Balliet, of Philadelphia, Pa.; Dr. George F. Butler, of Chicago, Ill.; Dr. Dudley W. Buxton, of London, Eng.; Dr. J. Solis-Cohen, of Philadelphia. Pa.; Dr. N. S. Davis, Jr., of Chicago, Ill.; Dr. P. J. Farnsworth, of Clinton, Ia.; Dr. J. E. Moses, of Kansas City, Mo.; Prof. Joseph Remington, of Philadelphia, Pa.; Dr. L. E. Sayre, of Lawrence, Kas.; Dr. H. V. Sweringen, of Fort Wayne, Ind.; Dr. E. L. Stephens, of Fort Worth, Texas.

The chairman will be pleased to receive and place upon the programme subjects for discussion and papers.

JOHN V. SHOEMAKER, M.D., Chairman.

1519 Walnut Street, Philadelphia, Pa.

THE Cuvier Prize of the Paris Academy of Sciences, 1,500 francs in value, has been given to Prof. Marsh, of Yale University. The Cuvier Prize is awarded once in three years for the most noteworthy work published during that time on either geology or zoology.

A GERMAN doctor has started a theory that most drunkards can be cured by a very simple and pleasant course of treatment—namely, by eating apples at every meal. Apples, if eaten in large quantities, possess properties which entirely do away with the craving that all confirmed drunkards have for drink. Next!—*Jour. Med. and Science.*

The Canadian Journal of Medicine and Surgery

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Oral Surgery—E. H. Adams, M.D., D.D.S., Toronto.

Surgical Pathology—T. H. MANLEY, M.D., New York, Professor of Surgery, New York School of Clinical Medicine, New York, etc., etc.

Medicine—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and W. J. WILSON, M.D., Toronto, Physician Toronto Western Hospital.

Gynæcology and Obstetrics—GEO. T. MCKEOUGH, M.D., M.R.C.S. Eng., Chatham, Ont.; and J. H. LOWE, M.D., Toronto.

Medical Jurisprudence—W. A. YOUNG, M.D., L.R.C.P. Lond., Eng., Toronto.

Mental Diseases—EZRA H. STAFFORD, M.D., Toronto, Resident Physician, Toronto Asylum for the Insane.

Public Health and Hygiene—J. J. CASSIDY, M.D., Toronto, Member Ontario Provincial Board of Health; Consulting Surgeon, Toronto General Hospital; and E. H. ADAMS, M.D., Toronto.

Pharmacology and Therapeutics—A. J. HARRINGTON, M.D., M.R.C.S.Eng., Toronto.

Physiology—A. B. EADIE, M.D., Toronto, Professor of Physiology, Woman's Medical College, Toronto.

Pediatrics—AUGUSTA STOWE GULLEN, M.D., Toronto, Professor of Diseases of Children, Woman's Medical College, Toronto.

Pathology—W. H. PEPLER, M.D., L.R.C.P.Lond., Toronto, Demonstrator of Pathology, Trinity Medical College; Medical Registrar, Toronto General Hospital.

Laryngology and Rhinology—J. D. THORBURN, M.D., Toronto, Laryngologist and Rhinologist, Toronto General Hospital.

Ophthalmology and Otology—J. M. MACCALLUM, M.D., Toronto, Assistant Physician, Toronto General Hospital; Oculist and Aurist, Victoria Hospital for Sick Children, Toronto.

Address all Communications, Correspondence, Books, Matter Regarding Advertising, and make all Cheques, Drafts and Post Office Orders payable to "The Canadian Journal of Medicine and Surgery," 145 College St., Toronto, Canada.

Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. III. TORONTO, APRIL, 1898. NO. 4.

Editorials.

THE INFLUENCE OF MEDICAL MISSIONARIES IN CHINA.

LAST February the French Chamber of Deputies provided for the establishment of a doctor and pharmacist at Tchoung-King, where the French missionaries have founded a hospital containing eighty beds, and which is capable of accommodating one hundred and eighty patients, also a second similar post at Tchen-Tou, the capital of the Province of Se-Tchouen, and a third at Fou-Tcheou Arsenal, where there are French engineers and foremen, and some colonists from France are expected to settle. During his speech

Mr. Audriffed, who brought the question before the Chamber, showed that the English, German and American medical missionaries must have given an impulse to the use of the pharmaceutical preparations of their respective countries in China, and he contended that if France wished to take scientific cognizance of the valuable medical botany of China and introduce her own pharmaceutical products to the notice of the Chinese people, the proper way to go about it would be to establish French physicians and pharmacists in China.

This seems quite reasonable, for the physician of European or American training will naturally wish to prescribe in his Chinese practice, the preparations of the pharmacopœia with which he is most familiar. From acknowledgments made by M. Audriffed, it appears, that, in the competition for converts the French missionaries have been distanced by their English and American rivals, who have put medical missionaries in the field. Owing largely to the tangible services of a medical character, which the latter have been able to render to the Chinese, they have gained an influence over them which, the French missionaries do not possess.

At Tchoung-King, for instance, an American medical missionary, Dr. McCarterey, has not only given hospital service to the Chinese, but has trained several medical assistants, to whom he has given certificates, by the aid of which they practise medicine in the different parts of the Chinese Empire, carrying with them the influence of America. At Tchen-Tou the English missionaries have acted in a similar manner.

In addition to their efforts towards introducing Christianity among the Chinese, the medical missionaries occasionally render services to science. For instance, the English and German medical missionaries have, for a long time, been accustomed to send to the laboratories of their respective countries the pharmaceutical products of China, thus enabling medical botanists and other scientists to study the properties of these drugs.

We have been informed that there are four Canadian physicians engaged in missionary work among the Chinese. It may be that, sooner or later, other physicians from this country may enter the mission field. Whether the number be great or small, we are sure that the training they have received in the medical schools of Canada will enable them to render valuable medical services to the Chinese. It occurs to us, however, that a Canadian medical missionary, well versed in botany, might collect specimens of valu-

able Chinese medicinal herbs and plants, which could be analyzed in laboratories at Montreal or Toronto. These drugs, if found to possess therapeutic qualities, might subsequently be prepared in a palatable form by the drug manufacturers of this country and returned to China.

Then, again, by sending orders for the necessary medicines and instruments, required in their practice, to Canadian manufacturers, the medical missionaries could aid in developing the trade and commerce of Canada. The shipping facilities from Canada to China are excellent, and that there is a good market waiting for Canadian drugs in China may be gathered from the fact, *that the Chinese consume more drugs than any other nation.* Dr. Deblenne, a French physician, who has recently returned to France from China, reports to his Government, that in the Province of Se-Tchouen, which contains forty millions of inhabitants and is governed by a viceroy, the most important article of commerce, according to the customs' statistics, is opium; MEDICINES occupy the second place: silk takes the third place only.

We do not wish our readers to infer from these statements, that the present and future Canadian medical missionaries in China should neglect their theological functions in order to cultivate medical botany, or push the exportation of drugs. By no means. But, as the value of medical missionaries is largely due to the professional services they are able to render to the sick, and as the Chinese must have medicines, there is no reason why the Canadian medical missionaries should not enrich medical botany by their collections, and the Canadian export drug trade by their orders. When the impulse is once given, the Canadian manufacturers could look after their own interests. J. J. C.

SURVIVAL OF THE FITTEST.

THAT in some walks of life the struggle for an existence should be so strenuous is, we think, a pretty sure indication that these vocations are not only overcrowded, but overcrowded to the danger point. Wherever human energy is concentrated there will necessarily be competition, and to the spirit of competition or peaceful rivalry is perhaps due every step of human progress. But of late years another meaning has been given to the word competition which differs very widely from the original signification. It

is natural and praiseworthy that a worker in any capacity should be ambitious to do better work than his fellows. It is right that a man should be fond of his work and proud of it when he attains to excellence in it: and when members of the same craft or the same profession vie with one another in the performance of the most perfect workmanship, as much for love of their art as for the material guerdon which may ensue, they may be said to be in legitimate competition with one another; and without such competition life would be indescribably flat.

But when the amount of work to be done is limited and those equipped to perform it are greatly in excess of the number needed for its accomplishment, it must necessarily follow that only a few will have anything to do at all and that the large majority will be unemployed. To this condition of things the term competition has been, we think, falsely applied of late years. The labor to be accomplished is viewed in the light of spoils, and the horde of workmen surround the coveted prey in turbulent warfare with one another. Thrice happy is he who in this war to the knife is able to snatch from the midst of the conflict some portion of the plunder and bear it away. However, it has been said that all is fair in love or war. In this war of competition a great many methods seem to be regarded as fair which, without the light of our venerable proverb, would hardly be so regarded.

Peculiarly to the present conditions in the medical profession do these remarks apply, for of all branches of handicraft the physician's seems to be the most overcrowded. The great desideratum of the present day seems to be a "respectable" calling. We suppose this is one of the unfortunate indications of the prevailing vulgarity of the time. One of the first results of University Extension and universal education of all classes will be that everybody will wish to live by his wits, or as it is sometimes more pompously expressed, be a "brain worker," forgetful of the fact that *we all cannot be parasites!*

The world will support only a limited number of parasites, whether they be physicians, barristers, clergymen or artists: as a tree in the south will support only a given weight of the Spanish moss. When the moss thrives beyond the tree's power of support it kills the tree, and with the fall of the tree comes the extermination of the vegetable parasite. All cannot be doctors and ministers and musicians, but a great part of the population unfortunately has set up as one or the other. This unnatural condition will last until it brings its own heavy punishment, and

then will come the slow and painful readjustment. At present, however, the parasitical class seem in a fair way to destroy the supporting class, and the quarrelling among the parasites affords an amusing tragi-comedy for the cynical observer.

The coveted quarry is the limited demand already referred to, and like birds of prey the workers are at it tooth-and-nail. Some go insane and some turn criminal in self-defence, while the remainder stop apparently at nothing in their undignified strife for an artificial existence. Some washerwomen, we believe, are washing so many shirts a year for so much, by this enticing bait endeavoring to attract to their own laundries a few of the very limited supply of shirts to be washed. The barbers are shaving by ticket with a shampoo for every four tickets; for while there are not enough shirts to keep the laundress busy, the barber complains of a similar scarcity of chins.

In an equally exalted spirit the physician walks up and down the earth in search of patients. He lies in ambush in the church and wheedles the parson. He offers himself humbly for the terrible mysteries and dread rites of a multitude of secret societies. (There is even a competition of secret societies and their number is legion.) Like the barber he beseechingly offers himself by the month, by the year, yes, and even for life, at any figure from half a cent to a cent a day. The physician, may we say, seems on the whole to be making himself rather cheap; but cannot he see that while there are twenty men to perform one man's offices, nineteen must go unemployed even if they offer themselves for nothing?

In the general demoralization the lodge method seems to have attracted the attention of a few who, having possibly failed themselves in turning the lodge to account, rave wildly against the evil. It is not lodge practice that is the primary evil. That is purely a secondary matter. It is the preposterous overcrowding of the profession that has shorn that honorable calling of so much of its dignity and influence. Canada has no army or navy and few manufactories. The civil service is limited, and with so few avenues of outlet, the majority of misguided youths, who have had the homestead of their progenitors mortgaged to facilitate their course through college, had no choice but a profession or a dairy farm. The pernicious smattering of academic wisdom at present in vogue, capped off usually with some Chautauqua course, appears to be quite sufficient to give the aspiring swain a dislike for the care of herds and the bucolic pleasures of the husbandman.

A little knowledge is a dangerous thing, and as a matter of fact these individuals are drunk with new wine. As a consequence thousands of men who might have been useful citizens, good sailors, brave soldiers or mighty mechanics, find themselves through their error in abandoning the "slighted shepherd's trade" for medicine or law, in the incongruous position of having absolutely nothing in the world to do, and having to keep up the difficult appearance of having something to do, and in the interim to live somehow between the two uneasy horns of their dilemma. E. H. S.

SECRET, PROPRIETARY AND TRADE-MARKED MEDICINAL PREPARATIONS.

We are very sorry to be obliged to differ from our highly respected contemporary, the *Philadelphia Medical Journal*, on so important a question as the legitimacy of certain medicinal preparations; nor can we altogether admire the tone of its reply to the criticisms of the *Pennsylvania Medical Journal* on this subject. Surely the "holier-than-thou" epithet is not argument, and its use should be left to the nostrum-defenders.

The confusion which these latter gentlemen like to throw about the main question, especially when advertisements are under consideration, seems, very strangely, to have affected in some degree our usually clear-sighted contemporary of Philadelphia. Undoubtedly the true line of cleavage between the permissible and the non-permissible, *ceteris paribus*, is the line of secrecy. Our contemporary rightly insists on this, but it fails to apply the principle correctly. Secrecy takes many different forms, and some of these are the more objectionable that they are sought to be cunningly concealed so that the secret nostrum may masquerade as a preparation devoid of taint. Hidden secrecy is not a paradox or a hyperbole, but a fact well known in the drug trade. Or, most perverse of perversions, there may be a claim or hint of secrecy when no secret exists. But in such a case fraud is intended.

Our contemporary has admitted to its advertising columns preparations, that the *Polyclinic* has consistently refused to advertise. Herein there may be only differences of judgment; one editor or publisher may as easily be mistaken as the other. Neither should call names.

Now as to the principle involved. Some years ago there were

laid down in an editorial article in the *Medical News*, certain rules governing this question, which met with general acceptance from those interested on the side of professional purity; and these may here be repeated. A medicinal preparation may be secret (*a*) as to its constituents; (*b*) as to the method of manufacture; (*c*) as to the composition of the finished product; or (*d*), as to all of these; and such secrecy may be partial or general. From the standpoint of science or of the interests of the professions of medicine or pharmacy, or of the welfare of humanity, all of these forms of secrecy are to be condemned without qualification.

Nevertheless, under certain circumstances secrecy as to the method of manufacture, etc., does not so far affect the standing of a preparation as to make it obnoxious to the prohibition of the Code of Ethics against the use of nostrums; or to prevent physicians from using it with perfect propriety. That is to say, when the *exact composition* of the finished product is made known, fully and without reserve, the physician need have no greater concern as to how it is made, than as to how the steel of his knives, or the gauze of his dressings is manufactured, or whether his favorite journal has its type set by hand or machine. Quinin sulfate, for example, may be manufactured by a secret or patented process—but the physician can, nevertheless, employ it without hesitation. Few articles, however, other than single chemicals, come under this heading. To take up the various factors of secrecy separately, it may be said;

(*a*) As to constituents. When the product is a definite chemic element or compound, the materials from which it is made may be secret without rendering the product a nostrum. Such secrecy is highly undesirable, but does not make the preparation unfit for use by physicians. In all other cases the materials from which the preparation is made must be published in full.

(*b*) As to process of manufacture. When the product is a definite chemic element or compound, or when its exact composition or an accurate scientific description is fully published, the process of manufacture may be secret. Such secrecy is, however, undesirable. In all other cases the process of manufacture must be made known.

(*c*) As to the composition of the finished product. This must be fully published whenever possible. Nothing must be concealed by suppression or vague statement. Thus let us suppose a preparation termed, *e.g.*, "Purgatin" to be described as "representing or containing ten grains of extract of buckthorn to the fluid-

ounce;" while in addition it likewise contains aloin, of which no mention is made. This is objectionable, and even fraudulent, secrecy. Such secrecy exists. Thus one well-advertised "emulsion of codliver oil and hypophosphites" is said to contain morphin, not mentioned, and another "preparation of codliver oil" has had all the oil carefully filtered out, so that it may be devoid of taste, but no hint of this fact is given to the purchaser. These preparations cannot be considered as legitimate.

There are, however, certain preparations, concerning the final composition of which definite information is lacking; in such cases descriptions of the source and method of manufacture are necessary. In general it may said that unless the composition can be stated in definite phraseology and exact quantities, all the materials used in preparation, and all the processes of manufacture from first to last, must by stated so accurately, qualitatively and quantitatively, that any pharmacist with the necessary facilities can duplicate the preparation from the information furnished.

To sum up: Either (1) a scientific description of the finished product, or (2) the constituents and processes of manufacture, must be stated fully and definitely in the recognized terms of biology, pharmacy and chemistry.

As to trademarked preparations, there is not much to be said presuming secrecy to be absent. When a descriptive name is trademarked, it creates an objectionable and perpetual monopoly. The article may have to be used, but the influence of physicians should be exerted to discourage the proceeding and to secure the repeal of the laws that permit it. When an article is trademarked under a name not descriptive, there is always a danger of secrecy if not of fraud. If, for example, *Jalap* should be sold as *Sirup of Oranges*, the presumption of intent to deceive would become very strong.

As to patents, the only thing about a medicine that can be patented is the process of manufacture. This involves publication, and a true patent, therefore, at once does away with secrecy. Patents are objectionable from the standpoints of humanity, of the progress of medical science, and of the obligations of physicians to the profession; but there is no impropriety in using remedies that have been manufactured by patented processes. The so-called "patent medicines" are not patented, but are secret or trademarked preparations.

Our contemporary is right in saying that everything is pro-

prietary; but at the same time it knows, or ought to know, that by a "proprietary medicine" is meant one that is made by a proprietor and cannot be made by others, because of trademark, patent, or secrecy. With our contemporary we prefer to drop the word altogether, and thus be able to fight secrecy in all its forms, cunning or foolish, without confusion or false issues.—*Philadelphia Polyclinic.*

THE MEDICAL TREATMENT OF APPENDICITIS.

During the discussions which have filled the medical journals about the indications for the surgical treatment of appendicitis, physicians seem to forget that sometimes a well-conducted medical treatment may also yield in a good many cases very valuable results. Professor Biermer has succeeded in obtaining cures in 98 per cent. of his cases of appendicitis by treating them in the following manner:

As soon as the diagnosis of appendicitis is made, or even suspected, the patient is confined to bed in a state of complete rest; he is not allowed to rise to urinate or defecate; a nurse placed beside his bed is ordered to pass him the bedpan or other articles he may require, and to see that he does not get out of bed. If acute abdominal pain and fever appear an iced compress or a bladder containing a small quantity of ice is placed on the abdomen. If cold applications are insupportable, or even disagreeable, lukewarm compresses, or preferably, linseed meal poultices are substituted, and the latter can be still employed after fever has disappeared and an exudation has formed.

From the beginning of the attack opium is preseribed, whether the patient is suffering from constipation, diarrhœa or simple colic. The tincture of opium may be used, giving to adults from 15 to 20 drops three or four times a day, or $\frac{1}{4}$ grain of morphine repeated three or four times a day. Later on, as the symptoms lessen in severity, the dose of tincture of opium is lessened to 8 or 10 drops three or four times a day.

With regard to the length of time devoted to this treatment all depends on the state of the intestines. As long as there is tenderness on pressure or even sensitiveness in the abdomen, particularly in the iliac region, as long as the swelling of the abdomen tends to increase, or as long as the patient suffers from pains or dragging movements in the abdomen, the use of opium must be continued. Dr. Biermer is even accustomed to leave a small phial of laudanum

with the patient, so that he can take a few drops if he suffers from abdominal pains. No attention is paid to constipation, which is inevitable, though the first voluntary stool should be delayed for fifteen or even twenty days.

The immobilisation of the intestine is also secured by a strictly liquid diet during the first days of the attack. All purgatives or injections are, of course, strictly forbidden.

Inclination to vomit and thirst, when very pressing, are treated by allowing small pieces of ice to dissolve in the patient's mouth. If there is no vomiting he gets rice water, toast water, or water containing a little wine: later on, bouillon, and at last, milk. When the pains in the abdomen and the tenderness are quite gone, the opium is discontinued.

The first voluntary stool ordinarily occurs from the fourth to the ninth day after the beginning of the attack. Only after the patient has had two or three such voluntary stools does he receive an enema or aperient. The patient must not rise from bed until he has had several voluntary stools and all tenderness of the abdomen has disappeared. He should be closely watched during convalescence, and should use a special diet from which all foods difficult of digestion should be excluded. During one or two years the patient should carry about with him a phial of tincture of opium, so that he may take a few drops of the medicine in case of colic. Should the exudation persist lukewarm compresses or, if necessary, mud baths should be prescribed. J. J. C.

ROCKWOOD HOSPITAL FOR THE INSANE, KINGSTON.

The Kingston Asylum for the insane, or Rockwood as it was originally called, and is still called by the general public, had for its first building an old stable erected before 1840 by John S. Cartwright, uncle of Sir Richard Cartwright. In 1854 this stable was converted into an asylum for twenty-four men, and the insane convicts were kept in the penitentiary. About 1859 the new Rockwood Asylum was commenced from plans drawn by William Coverdale, architect. The buildings at the time comprised almost every modern requirement in asylum architecture, and even to-day is regarded as one of the best-arranged institutions in the Province. The building was erected by convict labor, and is massively and strongly built. At first it was occupied as a criminal

ROCKWOOD HOSPITAL, KINGSTON.

BEECHGROVE HOSPITAL, ROCKWOOD, KINGSTON.

institution, but when it was acquired by the Ontario Government in 1876, had received many patients of the non-criminal class. Dr. John P. Litchfield was Medical Superintendent from March, 1855, until he died in 1868. He was succeeded by Dr. John R. Dickson, who resigned on account of ill health on December 31st, 1878. His successor, Dr. W. G. Metcalf, whose tragic death at the hands of a paranoiac, sent a thrill of horror throughout the country, remained in the position from 1878 until August 16th, 1885, and was succeeded by Dr. C. K. Clarke, who is still at the head of the institution. Drs. Litchfield, Dickson and Metcalf were of progressive type, and Dr. Metcalf, being young and active, had placed the institution on an excellent footing when death overtook him. The present management is in strict accordance with the demands of modern progress, and in many particulars Rockwood Hospital has been a pioneer in Ontario. Its training school for nurses was one of the first established in America, and its well-equipped separate hospital (Beechgrove) was the first building of the kind on the continent. Non-restraint has been strictly adhered to for a great number of years.

Rockwood Hospital is beautifully situated on the shores of Lake Ontario, and its grounds are more suggestive of an English gentleman's park than the ornamental grounds of an institution.

Medical Superintendent, Dr. C. K. Clarke: Asst. Medical Superintendent, Dr. J. M. Forster: Asst. Physician, Dr. J. Webster.

PROFESSOR, FORSOOTH!

"THERE is another kind of 'professor' who should not be tolerated. He comes from abroad and sends out his cards: 'Professor So-and-so, Graduate of Paris or Berlin. Electrical Treatment and Massage.' He is willing to take cases sent by a doctor, or will treat anyone who applies directly. Though not a medical man, he practises medicine and we permit him to do so. Every patient he secures is at the expense of some legally qualified practitioner, who has a right to expect protection from this sort of competition. Still medical men will, out of the kindness of their hearts or unthinkingly, support these men who call themselves professors and lose no opportunity to build up paying practices for themselves, independent of the support of the medical profession"

We quote the last paragraph from an editorial upon "Influence

of the Professor in the Struggles of the Practitioner," in a recent issue of the *Medical Record*, New York. May we, in our more brusque way, reiterate this statement. For some time we have been intending to speak of one species of the genus "Professor," and we smile as we think, even in a small Canadian city, how many there are, how they live, move and cut a wide swath in two places, the first, their own imagination, the second, the advertisement columns of the daily papers. They read nicely, don't they? Professor Blankety Blank, from Kilkenny (where the cats come from!!!) cures every disease by the great new power—Electricity. The gullible public, for a time at least, answer this advertisement by going in numbers and are *shocked*, especially in the purse pocket. Do these "professors" injure the regular practitioners? Most assuredly they do. They take the fees for unskilful treatment, which should find their way into the coffers of the skilful physician.

A few of these "professors," we are sorry to say, are recruited from the ranks of qualified medical men, who, perchance, through want of pennies and patients, have given up the ethical fight for existence, and, indeed, to many the temptation must come, especially in the overcrowded cities, to step down and out. For, in justice to the medical public, it should be understood these parasites have stepped "down and OUT," and deserve ostracism by the entire medical profession; they also should be taught, if not already cognizant of the fact, that between the practitioner of medicine and the "professor" of cure all ills, there is fixed an impassable gulf.

These "professors," and others of their ilk, who still retain the qualification of M.D., but who resort to everything but a poster and a string band to advertise themselves, are also a great menace to the young medical man just starting life. For instance, as the young practitioner passes by and sees one of these anomalies (with "professor" before and M.D. after the name that some poor fools stood sponsors for) raking in the shekels, he thinks of the castle in Spain he built, in his student days, with its wonderful tower of ambition. Alas, the beautiful picture has merged now into an impressionist's daub, all in shadowy grey. He thinks of the empty purse, the scarcity of patients, and a great bitterness seizes the soul of him; then the temptation, perchance, comes to quit the ranks of ethical practitioners. As the vision broadens, he sees piles of gold, and, for the moment, diamonds are trumps. But if, just at that moment, he is allowed to compare values by the approach of a physician of the old school, a cordial greeting is extended to the

young man by the old professor (the genuine article this time), one of the men who made the title necessary, and by such only should it ever have been borne. The young physician sees in the old face the lines that tell of great fortitude, patience and decision; then he thinks, after all, it is worth much to be an honored practitioner like his old friend, a member (though obscure indeed he feels himself) of the great brotherhood, and he says to himself, "Starve, if I must, but inside the ranks I'll stay, and die game."

W. A. Y.

SUBSTITUTION.

Among the strange and objectionable practices observable in people engaged in different branches of business, there is none which betokens a greater anxiety to get money without giving full value therefor than substitution. It always indicates, no matter what the character of the desired purchase may be, that the buyer does not really know what he wants, and that being in a vacuous mental condition he is quite willing to accept the suggestion of the seller.

If the substituted goods are really worth as much as those asked for, the merchant may apply the flattering unction to his soul and congratulate himself on putting money in his own purse without abstracting it feloniously from that of his customer.

When a physician writes his own formula he expects that the medicine will be prepared according to his directions, and if the pharmacist deviates from the formula, unless for grave reasons, he lays himself open to a charge of dishonesty. The formula is the property of the patient, who is entitled to have it put up according to the written directions.

Should a physician prescribe a patent medicine, the owner of the prescription is entitled to the same consideration. The medicinal preparation is selected by the physician, the pharmacist is merely the dispenser and should he not have the required preparation, he should procure it, or, if this cannot be done, should not undertake to substitute another in its place. Changing an order is dishonest and should be met with the strongest condemnation.

We are pleased to learn that this objectionable habit has not taken hold of the Toronto pharmacists. Some of them may have been smitten with it, but only a very small minority. What a physician orders the patient gets. It is the duty of the physician,

however, to see that the pharmacist with whom he deals keeps in stock the preparations he requires. If he allows his prescriptions to be dispensed at any pharmacy, the patient may not always get what the prescriber intends, although to quote the hackneyed phrase, it is said to be "just as good." J. J. C.

A SURE CURE FOR HOSPITAL ABUSE.

We are more than pleased to learn, and we had only the good fortune to come to the knowledge of the fact recently, that the Philadelphia Polyclinic has taken a firm stand to stop the system of hospital abuse so prevalent. Every person presenting him or herself at the hospital for free treatment is handed by the janitor a blank, which they are requested to have carefully filled out and signed BEFORE receiving the treatment requested.

I hereby certify that I am unable to pay for the services of a doctor, and on that account consider myself a proper person for free treatment in the dispensaries of the Polyclinic Hospital.

Name

Address

The following persons know that I am not able to employ a doctor:

Name ...

Address

Name

Address

This method has been found most effectual in preventing imposition, only a small percentage of the cards coming back properly filled out. All honor to the Philadelphia Polyclinic. "Awake thou that sleepest," and let all Toronto, yea, all our Canadian hospitals, "go and do likewise." W. A. Y.

THE ETHICS OF MEDICAL WRITING.

We cannot say that we agree with the views of our respected exchange, the *Philadelphia Medical Journal*, expressed in an editorial appearing in its issue of the 19th ult., wherein it claims that all editorials appearing in medical journals should go unsigned, and that the journal should assume all responsibility therefor. It is only a matter of a difference of opinion, and our contemporary has a perfect right to its own, but not necessarily to insist that such should be generally adopted. We think that the staff of any particular journal, who take sufficient active interest in its welfare to contribute to its pages, should assume the responsibility, if responsibility there be, of their particular views on any subject, otherwise at some juncture there might be a certain amount of confusion. We will suppose, for example, that one member of a staff of collaborators wishes to write a short article on serum therapy, in which he incorporates certain ideas not in accord with all of his confreres. Why, in that case, should the editor-in-chief of that journal have to stand the brunt of the battle if afterwards any discussion ensued on the subject? We think that what a writer says in print, be it in the form of an editorial or otherwise, he should be prepared to stand by. Perhaps our contemporary holds the opinion that, by the initialing of such paragraphs, the writers have a foolish idea that it gives them a certain amount of quiet advertising among their confreres. Nothing so small. It simply entails a personal responsibility for views expressed.

W. A. Y.

CHRISTIAN SCIENCE IN THE STATE OF PENNSYLVANIA.

We are pleased to notice that the Christian Scientists were severely sat upon by one of the judges of the State of Pennsylvania recently. A sect of these so-called religionists had applied for a charter for the First Church of Christian Scientists, but which was promptly refused. The judge, in handing down his judgment, said that had they, the applicants, been a purely religious body, all would have been well and their application promptly granted, but when they wanted "a charter to give them the privilege to violate the laws of the State, no such charter could be granted." The judge pointed out that for them to treat small-

pox, consumption, cancer or scrofula would be a distinct violation of the Act of March 24, 1877, which demands the proper education of every person who undertakes to treat diseases. W. A. Y.

A RETURN TO THE OLD STYLE OF TREATMENT.

The antiseptic method of treating vulvo-vaginitis does not appear to give much satisfaction. Dr. Behrend, of Berlin, has had nothing but failures with it, so that he has gone back to the old style of treatment, which gives him altogether better results. He treats vulvo-vaginitis of gonorrhœal origin by irrigation with a solution of alum; subsequently he tampons the vagina with cotton wadding steeped in a solution of alum, having previously applied a 10 per cent. solution of chloride of zinc to the cervix uteri. Iodoform, introduced into the vagina by an insufflator, causes the secondary vaginitis to disappear rapidly. Secondary urethritis and inflammation of the vulvo-vaginal glands disappear spontaneously after the vulvo-vaginitis is cured. J. J. C.

THE ONTARIO MEDICAL ASSOCIATION.

The 18th annual meeting of the Ontario Medical Association will be held in Toronto, June 1st and 2nd, under the presidency of Dr. Wm. Britton. Invitations have been extended to Lauder, Brunton, Professors Adami and Jas. Bell, of Montreal; Professor MacCallum, of London, leads in Medicine; Professor G. A. Peters, Toronto, in Surgery; Dr. Allen Baines, Toronto, in Diseases of Children; and Dr. H. Howett, in Gynecology. A large number of papers have been promised and a goodly attendance expected.

We think it will interest our readers to carefully peruse the letter signed "Practitioner" appearing in this issue of the Journal. We invite correspondence on the subject, and cannot but think that what "Practitioner" says is right, and we look forward to the time when such an idea will be adopted in all our hospitals and the present system of robbery cease forever. W. A. Y.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

HOSPITAL ABUSE.

TORONTO, *March 14th, 1898.*

To the Editor of THE CANADIAN JOURNAL OF MEDICINE AND SURGERY :

DEAR SIR,—With your kind permission I wish to say a few words about a form of hospital abuse which has become very prevalent. I refer to patients who are well able to pay their regular medical attendant, but who prefer to go to hospital and pay from $2.80 to $6.00 per week, *because they can there receive free attendance*, either medical or surgical, from members of the staff. It is even reported that free attendance is held out to these people as an inducement to take a bed in hospital. It has become a common thing from one end of this province to the other for patients of this class to leave their physician and go to hospital and think they have a perfect right to do so. They think the Government pays the hospital staff, and consequently they have a right to free treatment.

If my patient leaves me and goes to some other physician I can find no fault, but if he leaves me and goes to a hospital, which, as a ratepayer I help to support, I feel a just cause for objection.

This abuse affects the country physician, inasmuch as he often loses a patient which he otherwise would treat at home, but who will return to him for treatment when again sick ; but with the city physician the patient is not only lost for the time, but it may be for all time.

The hospital physician has no desire to steal patients in this way, but if he attend a patient through serious illness in hospital, he may be called on to attend him as a private patient next time.

I would propose as a remedy for this state of affairs that no patient be given free treatment in hospital except he receive his hospital maintenance from the municipality in which he resides.

If this were done the hospital physician or surgeon would receive pay for all his work where people were able to pay, and where they were not able he would feel his work one of sweet charity and not imposition.

Some would object that this would be giving a bonus to

members of the hospital staffs, but if they do the work they should have the pay.

At present the hospital staffs give more in work to the hospitals than the whole city gives, besides their share of the city taxes, and it is a fraud on them that patients well able to pay should get free treatment simply by paying for a hospital bed.

It is to be hoped this question will be taken up by some of your correspondents better able to deal with it than myself, and especially by medical societies throughout the country, and agitation continued until the hospitals do justice to the profession.

Yours truly,

PRACTITIONER.

Personals, Etc.

DR. M. CURRIE has taken up practice at No. 12 Carlton Street.

DR. LESLIE SWEETNAM will be absent from Toronto all this month.

DR. T. WYLIE will act as scrutineer in the coming Medical Council election.

DR. MATTHEWS has resigned the House-Surgeonship of the Home for Incurables, Parkdale.

DR. WARNER has moved a few doors east of his former address,—to No. 10 Carlton Street.

THE house occupied by the late Dr. James Burns, at 7 College Street, has been taken by a dentist.

THE most highly decorated member of the profession in England is said to be Sir William McCormack.

DR. FOTHERINGHAM has moved across the street to 38 Carlton Street, one of the houses recently erected.

DR. C. F. MOORE contemplates removing from College Street to 91 Bellevue Avenue about the 1st of May.

DR. DWYER, Medical Superintendent of St. Michael's Hospital, has opened a private office at 106 Wilton Avenue.

DR. GEO. CARVETH has purchased the Hunter property on the corner of College and Huron streets, and will move there very soon.

Surgeon-Lieut. Foster of the 67th Battalion has been appointed medical officer to the Yukon expedition, which will leave for that country this month.

Dr. F. J. Shepherd, of Montreal, was elected a member of the Executive Committee of Association of American Anatomists at the recent meeting at Ithaca, N.Y.

Sir Richard Quain, Bart., Physician-Extraordinary to Her Majesty, President of the General Medical Council, and editor of the *Dictionary of Medicine*, died last month.

Dr. R. Harvey Reed, who recently moved to Rock Springs, Wyo., from Columbus, Ohio, has been appointed Surgeon-General of the National Guard of Wyoming, with the rank of Colonel.

Any Doctor intending to attend the meeting of the American Medical Association, at Denver, Col., in June, will hear of something to his advantage by communicating at once with the Journal.

The graduating class of the Medical Department of Baltimore University, numbering more than one hundred young physicians and surgeons, has passed resolutions offering the services of all the members to the Government in case of war with Spain.

Dr. S. M. Hay and Mrs. Hay, of Spadina Avenue, are spending a couple of months in California. Dr. Hay during his absence will also visit the principal western cities, including Denver, Col., with a view to perfecting his knowledge in abdominal work. Dr. Perry Doolittle accompanied Dr. Hay on this delightful trip.

The management of the *Western Medical and Surgical Gazette*, published at Denver, Col., intend getting out a special number in connection with the American Medical Association this summer. It will be profusely illustrated with half-tones of different parts of the State of Colorado, and altogether will be worth keeping. Any medical man desiring a copy can secure one by sending two three-cent stamps to the office of publication.

On January 19th, Dr. Dawson Williams was unanimously elected editor of the *British Medical Journal*. He has been assistant editor for the past seventeen years, having full charge during the absence of Mr. Hart. He was present during the Montreal meeting of the British Medical Association. Mr. C. Louis Taylor, for eleven years past sub-editor, was appointed assistant editor with Dr. Williams.

The Physician's Library.

The Nervous System and its Diseases. A practical treatise on Neurology for the use of physicians and students. By Chas. K. Mills, M.D., Professor of Mental Diseases and of Medical Jurisprudence in the University of Pennsylvania; Clinical Professor of Neurology in the Woman's Medical College of Pennsylvania; Professor of Diseases of the Nervous System in Philadelphia Polyclinic, etc., etc. Diseases of the Brain and Cranial Nerves, with a general introduction on the study and treatment of Nervous Diseases. With 459 illustrations. Philadelphia: J. B. Lippincott Co.; London: 6 Henrietta Street, Covent Garden, 1898.

There is no branch of medicine, which so much required a clear and lucid work, at least on this side of the Atlantic, as did Neurology. We think we are correct in saying, that with the exception of a work of great merit by England's Neurologist, Gowers, there was not in existence till now any book, more than a manual, which attempted to go into the diseases of the nervous system to any extent at all. It may not be therefore, owing to that fact, complimentary to the author of this book to say that the one under discussion "fills the bill." But whether or not, it remains however a fact, that Mill's "Diseases of the Nervous System" will be adopted by American neurologists and the profession at large from this date. We are pleased to note that the author wisely decided to make the work complete in one volume, and did not bring out what is known as a system which often proves a very weariness to the flesh. Dr. Mills in this work has gone into the discussion of nervous diseases in general, but has not by any means failed to discuss in full diseases of the brain and cranial nerves. The introductory chapters have been made full. They comprise the Embryology, Physiology, Chemistry and also the Anatomy of the Nervous System, with a general consideration of the General Pathology, Etiology and Symptomatology of Nervous Diseases. The methods followed all through the book, the author admits, are based mainly upon experience in private and hospital practice. Considerable space has been devoted to the subject of localization, a subject of such keen interest to all physicians. The author does not follow the usual order in which cranial nerves are enumerated in discussing them, affections of the special nerves being considered together. Something which has been treated too lightly in the past in works of this character, has been affections of the sense of taste. Mills has however given considerable attention to this chapter. The illustrations all through the book are well executed and almost all new. We heartily recommend this book to all who want something fully up-to-date. Finding at the last that it was impossible

to include Insanity and the Medical Jurisprudence of both Nervous and Mental Diseases in this volume, the author intends, possibly in the near future, to publish another volume dealing with those branches.

The Doctor's Window. Poems by the Doctor, for the Doctor and about the Doctor. Edited by Ina Russelle Warren, with an Introduction by Wm. Pepper, M.D., LL.D. Buffalo: Charles Wells Moulton. 1898. Price in cloth, $2.50; in morocco, $5.00.

A perusal of this beautiful volume will prove a twofold revelation to the physician. He will be amazed to find what a large number of eminent poets have been members of the medical profession, and, conversely, how many physicians have found time for the softer graces of literature. On the other hand, his eyes will be opened to the innumerable phases of heroism, pathos and romance, which are to be found every day in the round of his own professional duties, touches of human poetry which, through long familiarity, have possibly escaped his notice altogether.

The sentiment and the inspiration of the medical profession are well represented in this sumptuous volume. From grave to gay, from pleasant to severe, the familiar objects and the daily drama of the doctor's life are here called back to memory in the fresh coloring of the imagination, and softly illuminated with the spirit of poesy.

It is a widely representative volume both as concerns time and country. There are good translations from several languages; and from the time of Thomas Tusser, with his Five Hundred Points of Good Husbandry, to William Ernest Henley of our own day, all that is good has been judiciously selected and embodied in this work. The polished Garth, the quaint Armstrong, and the brilliant Oliver Wendell Holmes appear in the foreground, surrounded by over a hundred other medical men of genius. As the physician turns the pages he cannot avoid a feeling of pride in belonging to a profession which can furnish a subject so nobly dramatic, and men of refinement to set it forth.

All that could be done to add to the literary value of the book has been done by the publishers, and with its rich and æsthetic binding, heavy, uncut parchment paper, tasteful type and numerous engravings, it makes a book that will alike rejoice the heart of the bibliophile or the casual reader. We especially bespeak a kindly reception for this work in Canada, where we know there are many of cultivated tastes who will appreciate it. E. H. S.

The Lion and the Lilies, a Tale of the Conquest, and Other Poems. By Charles Edwin Jakeway, M.D. Toronto: Wm. Briggs, 1897.

While this volume of poetry by Dr. Jakeway contains no references to the life of the physician, it is certainly a work of exceptional interest to the Canadian reader on account of the

historical events, which are here given a fine poetic setting. The initial poem of the book is about the same length as the Endymion of Keats, and while lacking the richness of imagery, is written in the same unartificial and flowing style. Those who find the exact measure of Pope or Dryden distasteful will enjoy the artless and untrammelled versification of this poem, where a great historical epoch is portrayed, an epoch in which all Canadian readers will take a lively interest. There are besides a number of spirited ballads and one or two simple idyls of rural life, of which one in particular recurs to memory, "Dinner is ready, Tom," a poem in which there is an admixture of archness and pathos, making a picture of singular beauty.

The complaint against the medical profession, a complaint which we are afraid is becoming more and more frequent, that the physician's idea of humor is grotesque and coarse, and that his social conversation is usually uncouth and obscure, will, we hope, at least find a partial repudiation in the above books by physicians, where there is not a base word or thought. E. H. S.

Memory and Its Cultivation. By F. W. Edridge-Green, M.D., F.R.C.S. New York: D. Appleton & Co., 1897.

When one considers the rather unscientific methods which are so frequently devised to assist in the memory of facts it is a great satisfaction to find a work so well based upon scientific data as is this little volume by Dr. Green.

The work is written in two parts. The first has to do with the anatomy of the brain and the study of its functions. The second part deduces practical rules, which are based on the former. "In an age which is specially characterized by intellectual progress, much time must necessarily be spent in the acquirement of knowledge which will serve as a basis for further development." Hence any rules which are logical and resting upon a scientific basis will be found helpful.

It will, perhaps, be difficult or impossible for many laymen to read the first part of the book, which is much the greater; but the second, which is thoroughly practical, may be read independently of the former, and such a connected knowledge of the former may be obtained as will enable the reader to follow the principles upon which the second part is based. To say that the first part is without fault would be uttering words of praise higher than the facts warrant. The author seems to show too marked a leaning toward the old teaching of phrenology, and yet it is only just to say that he is not its slave, but that he shows a well-marked independence.

This work should be in the hands of every teacher. To enable the young to carry out the principles that are here laid down, and to observe the rules which are given in its second part, will aid the development of a memory that will be of great service to every worker in intellectual pursuits. B. E. M.

The Habitant, and other French-Canadian Poems. By William Henry Drummond, M.D., with introduction by Louis Frechette, and illustrations by T. S. Coburn. New York: G. P. Putnam's Sons, 1897.

Everyone will remember the song of the Julie Plante, "On wan dark night on Lac St. Pierre," which was sung and recited all over Canada a dozen years ago, the work, as inquiry proved at the time, of an anonymous writer, who we have recently learned was no less a person than the gifted Dr. Drummond, of Montreal. He has since written many more poems in the same inimitable vein, which have from time to time appeared in various magazines, and it will be with pleasure that his friends learn that he has collected these into a permanent volume.

More especially will the members of the medical profession give his work a cordial welcome as a book which is not only the work of a fellow-craftsman, but as a book which contains some of the best literary work of that gendre yet accomplished by a Canadian. The collection contains, moreover, a poem, "Ole Docteur Fiset," which, I think, is the best of the sort yet written. It does not affect the vulgar puerilities which for some reason or other are regarded in some quarters as the chief charm of "Doc. Sifers," that much overestimated effusion by J. W. Riley: and while Carleton's "County Doctor" has many pathetic touches, there is a sincerity and a lifelike reality in Dr. Drummond's poem which, I think, will give it a higher place as one of the classics of Æsculapian belles-lettres.

The book is an *edition de luxe* and is embellished with between ten and twenty exquisitely executed engravings. E. H. S.

Thèrapeutics of Infancy and Childhood. By A. Jacobi, M.D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Columbia University, New York; late President of the Association of American Physicians, of the New York Academy of Medicine, of the Medical Societies of the County and of the State of New York, etc., etc., etc. Second edition. Philadelphia: J. B. Lippincott Co., 1898.

The mere fact that it was the author of this book who, as far back as 1860, established on this continent the first systematic course of clinical instruction in the diseases of children, makes this work of value as affording to the profession at large a compact picture of the therapeutics of infancy and childhood as viewed by one well able to act as teacher. The work is devoted most largely to diet and hygiene, as well as a goodly part of it to the action of medicines, as Dr. Jacobi believes strongly that medicine is to the physician what the knife is to the surgeon. Considerable attention has been given to both etiology and symptomatology, as "without a diagnosis of the morbid process and of its evolution, and without the appreciation of its influence on the patient, no rational therapy

can be thought of." One point which will be appreciated by the reader is that considerable length has been given to the differential diagnosis. Owing to the partiality shown by some for the metric system, the author has alternated the old with the new in referring to the prescription to be used in treatment, considerably more care having been used in this edition in the discussion of doses of drugs. In a word, verbosity has been avoided and the plan of condensation followed all through the work.

Uric Acid as a Factor in the Causation of Disease. A contribution to the pathology of high blood pressure, headache, epilepsy, mental depression, paroxysmal hæmoglobinuria and anæmia, Bright's disease, diabetes, gout, rheumatism and other disorders. By Alex. Hay, M.A., M.D. Oxon., F.R.C.P., Physician to the Metropolitan Hospital and the Royal Hospital for Children and Women; late Casualty Physician to St. Bartholomew's Hospital. Fourth edition, with 65 illustrations. London: J. & A. Churchill, 7 Great Marlborough Street, 1897.

The immense sale of the last edition of this work necessitated very soon a new one largely increased in size. The fourth edition contains the result of new investigations by the author, and also a large amount of fresh material inserted "in reply to criticisms by fellow-workers." It can be certainly said that Dr. Hay has written this book as the result of personal research work, as it is full of the brightest and crispest chapters, each one being more interesting than the preceding one. There are almost too many additions to this edition of the book to be referred to singly. Amongst others there are: The treatment of chlorosis; the demonstration of uric acid and xanthin in the blood; the effects of wines, acids and alcohol on the acidity of the urine; the accidental causation of endocarditis by drugs, and many others. The book is exceedingly readable.

Doctor and Patient: Hints to Both. By Dr. Robert Gersuny, Director and Principal Visiting Surgeon of the Rudolfinerhaus, Vienna. Translated, with the permission of the author, by A. S. Levetus, with a Preface by D. J. Leech, M.D., F.R.C.P., etc., Professor of Pharmacology in the Queen's College and Victoria University. Bristol: John Wright & Co. London: Simpkin Marshall; Hamilton, Kent & Co., Limited; Herschfeld Bros., 82 High Holborn. Price, 2 shillings.

"Common-sense does not concern itself merely with the symptoms of disease, but keeps its eyes open," so says the author of this concise little volume. The relation between physician and patient is and has been the subject of essay, editorial and newspaper joke, and yet any rules of "thou shalt" or "thou shalt not" have not been laid down for the benefit of the verdant young fool of a medical man starting out in life full of the ponderous knowledge of

medical lore, but often sadly lacking in the knowledge of how to acquit himself in the intricate relations which sometimes occur between physician and patient. This book may prove valuable to many whose former blunders may simply have arisen from brusqueness, or their having studied themselves in the light of—"as others see them."

Munsey's Magazine, New York, published monthly. Price, $1.00.

It did not require the recent visit (to the Press Association at Ottawa) of the publisher of this splendid magazine to introduce the name of Munsey to Canada. Hardly a home of even moderate means into which this publication has not found its way. It abounds in well-chosen articles, verse and story, and also appeals strongly to the artistic side of the reader's nature, through the numerous half-tone illustrations which it contains.

The Outlook, New York, published weekly. Price, $3.00 year.

Weekly magazines are many and moments of leisure for reading are comparatively few, consequently a careful choice has to be made and only those journals selected which contain the most profitable reading, combining, of course, the necessary element of entertainment. The *Outlook* is well edited and is worthy of a place on the library table of every busy householder.

ANNOUNCEMENT OF NEW BOOKS.

THE following books are in press and will soon be issued by the publishers, J. B. Flint & Co., 104 Fulton Street, New York:

Flint's Encyclopedia of Medicine and Surgery. Second (1898) edition, 1555 pages, revised with the assistance of fifty-six contributors, and thoroughly in line with recent advances in medical science. Cloth, $5.00; leather or half mor., $6.00.

Hartley-Auvard System of Obstetrics. Third (1898) edition, 436 pages, 543 illustrations. Revised by Dr. John D. Hartley. This work is essentially Auvard, and embodies the author's personal experience. The text is clearly pictured by hundreds of original drawings to be found in no other book. Cloth, $4.00; leather or half mor., $5.00.

Pozzi System of Gynæcology. Third edition. Revised by Dr. John D. Hartley.

THE publishers of the *Monthly Cyclopedia* are to be congratulated upon the initial numbers of that journal under its new name. We can conceive of nothing which could be more up to date than the methods adopted by the editor. The material from cover to cover is crisp, and is presented in such a form as to be very readable. We portend a greatly increased circulation for this journal, and wish its editor abundant success.

Items of Interest.

The average yearly income of physicians in New York City is said to be only $1,500.

Of late years there has been a considerable falling-off in the number of students matriculated at Glasgow University.

Professor Lenard, of Heidelberg, who first discovered the cathode rays, has received from the French Academy of Sciences its prize of 10,000 francs.

It is proposed to provide free courses to physicians in Berlin, in which they shall be instructed in all the laws bearing upon the profession and its practice.

There has lately been patented in Europe a machine called a divnometer, which is said to gauge the psychic force of the individual on whom it is used.

Dr. Samuel Pozzi, of Paris, has recently been elected to the French Senate from Dordogne. He is the author of the well-known "Treatise on Gynecology."

In 217,000 prescriptions, written in Chicago, Philadelphia, Boston, Denver, San Francisco, New Orleans, and St. Louis, 11.25 per cent. were for proprietary articles.

Dr. Wm. H. Welch, of Johns Hopkins Hospital, has been appointed by the Governor of Maryland a member of the State Board of Health, and has accepted the position.

After fifty-seven years of continuous service as a nurse in the Salpêtrière of Paris, Mlle. Marguerite Botard has had bestowed upon her, by the French Government, the cross of the Legion of Honor.

Osler is reported to have made the following remark: "Know Syphilis in all its manifestations and relations, and what remains to be learned will not stretch the pia mater of a megalocephalic senior student."

Mr. Edward Nettleship has given £250 to the Royal London Ophthalmic Hospital for the purpose of providing apparatus and appliances for the laboratory and museum in the new hospital, now being built in the City-road.

The city of Bloomington, Ill., has been left, by the will of ex-Chief Justice John Scott, of that city, a $2,000,000 bequest for the purpose of founding and maintaining a hospital there. [What is the matter with some kind soul in Toronto doing likewise?—Ed.]

Members of the American Medical Association who purpose attending the coming June meeting, to be held in Denver, may expect the usual exorbitant hotel rates. Already the managers of hotels in that city have refused to reserve single rooms unless occupied by two persons.

THERAPEUTIC USES OF VICHY WATER.

No natural water has ever been made the subject of such exhaustive clinical study as that of the Vichy Springs, and it owes its reputation, not to a simple popularity due to its pleasant taste, but from a fame resulting from the crucial test of centuries of clinical observation.

Like other mineral waters, their activity is somewhat greater at the spring than when taken in bottled form. Yet this is scarcely a disadvantage, since in many cases it allows of a milder, more prolonged effect which is especially serviceable in chronic conditions.

It has been noted that the three springs are very similar in their chemical composition. In practice, it is found that the water of Célestins is especially indicated in disorders of the kidneys, and such as depend upon the uric acid diathesis: rheumatism, gout, gravel, and cutaneous lesions, such as eczema, etc. The Grande-Grille water is deemed to be especially efficacious in stomach and liver disorders, while the Hospital spring is useful in the same way, but is somewhat milder and slower in its action than either of the others.

Practically it may be said that the water of the Célestins spring meets every indication for the employment of Vichy Water. It has a mildly diuretic action of great power, and its action upon the liver and stomach is excellent. By its continuous use the blood is rendered more alkaline, deposits of uric acid in the form of sodic urates no longer take place, since the acid becomes promptly changed into urea, which is rapidly eliminated. The bile becomes diluted, and calculi are no longer formed in the gall-bladder. Those which may be present are disintegrated through the solution, in a strongly alkaline medium, of the mucus which holds the various parts together, and the fragments are discharged through the common bile duct into the intestinal tract.

In chronic hepatic disorders there is secured a greater flow of bile, and the improvement in gastric and intestinal digestion, due to the alkaline treatment, relieves the liver of a large part of the work previously given to it. In cases of hepatic sluggishness, attended with painful and slow digestion, the effects are often nothing short of marvellous.

In gastric and intestinal indigestion the use of Vichy secures a more free action of the bowels, digestion becomes more perfect, and the products of this digestion reach the blood in a better prepared condition. This relieves the liver and kidneys, which no longer have to deal with so many products of imperfect metabolism, and therefore we rapidly see an improvement in the general health which is quite surprising in character.

A very large number of the girls and young women for whom we prescribe iron owe the poverty of their blood to gastric and intestinal sluggishness, and the great majority of cases of anæmia and chlorosis are therefore much improved by the Vichy treatment.

In gastric derangements due to dietetic errors, and in those in which the abuse of alcohol may be incriminated, the Vichy Waters are of unquestionable efficacy.

If dyspepsia is of the decided acid variety, the Vichy Waters naturally act as antacids, and as such are clearly indicated. In this form of dyspepsia we commonly find that those who are content with prescribing bicarbonate of soda are disappointed in regard to the permanency of the effects obtained. As has been said by Bartholow: "While the immediate result is good, the after effect is to increase the production of acid. Those who habitually take sodium bicarbonate for acid indigestion suffer severely from acidity." If the alkaline treatment is limited to the use of Vichy Water no such unfortunate result can occur. Medication by the use of the alkalies themselves must be carefully dosed as to amount and time of administration. Bicarbonate given before meals increases acidity; given after meals it lessens acidity by the chemical neutralization of a part of the acid of the gastric juice, but while it acts in this manner it fails to afford the multiple results achieved by the Vichy Waters, due to the dosage accomplished by Nature itself. These waters so promote oxidation in the system, and have such a general effect in improving nutrition, that they finally eliminate the causes themselves of the disturbed digestive processes.

In chronic catarrhal gastritis or enteritis, where there are no very acute symptoms, the use of the Vichy Waters is attended with the best results. In cases of atonic dyspepsia, in which there is a deficiency in the amount of acid, the Vichy Waters given before meals will increase the production of hydrochloric acid, and by their general effects upon the system will be found to exert a curative influence.

In gout we soon obtain a diminution of the production of acid, the formation of deposits of insoluble urates is checked, and an improved metabolism reduces the formation of waste products that prove irritating to the whole excretory apparatus. The skin takes on an improved action, the kidneys secrete more urine containing a larger amount of urea, and an increased intestinal action improves digestion and nutrition. In chronic emphysema and asthma, as well as in the bronchitis from which so many gouty subjects suffer, it is usually found that the Vichy treatment affords a decided improvement simply due to the amelioration of the general condition. In a tendency to the formation of uric acid gravel no treatment is so effective as the long-continued use of the Célestins water. It frequently causes the expulsion of calculi from the kidneys, and prevents the formation of gravel. As in the case of biliary calculi, its use may give rise to colics, denoting the expulsion of the stones. However disagreeable such occurrences are to the patient, it is evident that they point to an effort, on the part of Nature, to restore a normal condition of affairs, and result finally in an amelioration of the general symptoms.

In chronic rheumatism the effect produced is the same that

occurs in gout. In acute attacks we necessarily employ means intended to relieve the symptoms with greater rapidity than could be expected from the use of a mineral water alone. But as soon as the acute stages are passed, the employment of Vichy Water improves nutrition, prevents the formation of any excess of acid in the system, and forms the best treatment that can be instituted in order to check the rheumatic tendency and prevent the occurrence of relapses. In chronic forms of rheumatism the use of Vichy Water is so clearly indicated that we need insist no further upon it.

In diabetes, both of renal and hepatic origin, Vichy Water often has the happiest effects. While we desire generally to reduce the amount of water consumed by these patients, they still are compelled to take large quantities, owing to their insatiable thirst. In these cases, if we substitute Vichy Water for the ordinary water they drink, we will nearly always find that after a fairly brief lapse of time the polydipsia is lessened, owing to the general good effects brought about by the natural mineral water upon digestion and nutrition. While it may not be asserted to possess an actual curative action in such cases, there is no doubt that under the influence of Vichy Water many diabetics return to a condition very closely approximating the normal, and can often, at least for many years, live under the pleasant illusion that they are cured, providing they faithfully continue the treatment.

In inflammation of the bladder, we have in Vichy Water a means of often successfully combating the causes to which it is due. As it brings about a rapid alkalinization of the urine, the latter becomes bland and unirritating. If the cystitis is a gouty symptom, as often occurs, it will rapidly get well, as, for instance, when it is a concomitant of uric acid gravel.

Within the limits of this short treatise we have only been able to rapidly show how vast a field exists for the careful and well-understood use of this peerless mineral water, which, like all other important therapeutic substances, should be given under the intelligent supervision of the medical man.

The Ninth International Congress of Hygiene and Demography under the patronage of H. M. the King Alfonso XIII. and H. M. the Queen-Regent, will as we have already announced, be held at Madrid from April 10th to 17th. Sir Douglas Galton, K.C.B., F.R.S., has been appointed chairman, Professor W. H. Corfield, M.A., M.D. Oxon., hon. treasurer, and Dr. Paul F. Moline, hon. secretary of the British Committee. Official receipts for tickets of membership may be obtained from Professor Corfield, 19, Savile-row, on payment of £1, and the Spanish railway companies will allow 50 per cent. to members of the Congress. Excursions to Spain at low prices have been organized by the Voyages Pratiques de Paris, Rue de Rome.

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Original Contributions.

THE TREATMENT OF INEBRIETY.

BY A. M. ROSEBRUGH, M.D.

BEFORE proceeding to the discussion of the medical treatment of inebriety, it will, perhaps, not be considered out of place to make some reference to the question from a more general standpoint. About two years and a half ago a deputation from the Ontario Medical Association waited upon the Ontario Government for the purpose of urging the establishment of an industrial reformatory in the Province for habitual drunkards. Petitions have also been sent to the Government by the Ontario W.C.T.U., by the Prisoners' Aid Association, and by other public bodies, with regard to the great need of a reformatory for inebriates, but the Government declines to take action, although some members of the Government admit that something should be done for the unfortunate class referred to.

In January last I was commissioned by the Prisoners' Aid Association of Canada to make a tour of inebriate hospitals and interview specialists in inebriety, with a view of formulating a practical scheme to be submitted to the Ontario Government, covering the entire question of the treatment of inebriates in the Province. This commission has been executed, and my formulated scheme has been presented to the association aforesaid, but its consideration has not, as yet, been taken up. My recomendations in brief are as follows:

1. The appointment by the Lieutenant-Governor in Council of an inspector of inebriate institutions. This inspector should be a qualified medical practitioner who has made the medical treatment of inebriety a special study.

2. The inspector should organize in the city of Toronto a hospital for the medical treatment of pauper male inebriates of the more hopeful class, and in

other cities of the Province an inebriate department in the existing general hospitals, more especially for pauper male inebriates.

3. An industrial reformatory should be established on the farm colony plan for the custody of the more hopeless or incorrigible class of male drunkards, and where they should be detained on indeterminate sentences.

4. Pending the opening of an inebriate hospital in Toronto, it would be both humane and in the interests of prison reform to give special medical treatment to the dipsomaniac inmates of the Central Prison.

5. For the more hopeful class of female inebriates, cottage homes (or utilizing existing homes) are recommended for special medical treatment.

6. For the incorrigible class of female drunkards, full two-year sentences to the Mercer Reformatory for Women are recommended.

7. In the adoption of scientific medical treatment the Norman Kerr-Crothers system or general plan of treatment is recommended. In the interests of science and good morals, proprietary remedies should not be used.

8. The adoption of the "probation system" for giving a helping hand to patients subsequent to treatment for inebriety.

The Ontario Medical Association has also asked the Ontario Government to make provision for the custodial treatment of epileptics. Question—Might it not be both a wise and an economical arrangement to provide a large farm colony for both classes under one management, the epileptics and the inebriates being provided for on the same or on an adjoining farm colony? Many of the inebriates could be utilized as farm helps, nurses, guards, etc., on the farm colony for epileptics. It is self-evident, it seems to me, that by carrying out the scheme herein formulated, the cost of treatment would be reduced to a minimum and the number of chronic inebriates remaining to be provided for at the Reformatory for Women or on a farm colony for men would be reduced to small proportions.

Medical Treatment.

It will be observed that in the above summary of my formulated scheme, I recommend the adoption of what I designate as the "Norman Kerr-Crothers System" of medical treatment. As a matter of fact, there is no system of treatment known as the Kerr-Crothers system. This is simply a short method of expressing the idea that I approve of the medical treatment of inebriates on sound principles only and in accordance with the tenets of legitimate medicine and in accordance with the general principles enunciated by Dr. Norman Kerr, the recognized English authority, and by Dr. T. D. Crothers, the recognized authority in America.

I have been asked to contribute an article to the Canadian Journal of Medicine and Surgery on the treatment of inebriety from the medical standpoint. After giving the matter due consideration, I decided that I could not comply with the request more worthily than by giving an abridged statement of the treatment as formulated by the two recognized authorities just referred to.

In the classical work of Dr. Norman Kerr on the Etiology, Pathology, Treatment and Jurisprudence of Inebriety or Narcomania, out of a total of 780 pages (3rd edition, 1894), 120 are

devoted to the question of treatment. As an introduction to the question of treatment Dr. Kerr takes up the discussion of the historical (so-called) antidotes for the crave for alcohol, including the following: The Turkish bath, coca, alcoholic extract of frogs, raw beef, vegetarianism, saturating food with liquor, the strychnine cure, the gold cure, cinchona bark cure, and cure by hypnotic suggestion.

The first indication in sound treatment, according to Dr. Kerr, is to withdraw all alcoholic stimulants. This can always be done with perfect safety. The second indication is to remove any predisposing or exciting cause. The special features in each case must be carefully studied Any physical or mental ailment must be treated according to indications. Dietetics and hygiene play an important rôle in the intelligent treatment of inebriety—quite as important, in fact, as the use of drugs for the removal of the drink-crave. Except in the case of surgical accidents or seasickness, collapse or delirium tremens very rarely follows the sudden withdrawal of intoxicants. When these are feared, however, the system must be fortified, firstly, by appropriate food such as the patient can digest and simulate; and, secondly, by the use of medicinal remedies. The following mixture is recommended to aid wisely chosen food to avert unpleasant complications:

℞	Inf. calumb.,	fl. oz. j.
	Sp. ammon. aromat.,	fl. dr. jss.
	Tr. cardamom. co.,	fl. dr. jss.
	Aq. distillat., ad	fl. oz. vj.

S. A sixth part every three hours.

In case of disordered digestion—nausea, vomiting, furred tongue—milk with soda or limewater, with ice and a stimulating effervescing mixture, would be given. 20-grain doses of potassium brom. are also given when thought necessary. The following form Dr. Kerr finds of service in these cases, and may be used with or without the bromide:

℞	Potass. bicarb.,	gr. 120.
	Sp. ammon. ar.,	fl. dr. j.
	Tr. cardamom. co.,	fl. dr. j.
	Tr. nucis vomicæ.,	fl. ℥ xij.
	Aq. distillat.,	fl. oz. vi.

S. A sixth part every four hours in effervescence with an acid powder—say, citric acid—15 grains. Hydrocyanic acid in two minimum doses may be added to this mixture.

In case of vomiting, very little water should be taken. It is better to suck a small piece of ice or take small sips of either hot or cold water. Milk or farinaceous diet are indicated here. Arrowroot and milk will be retained, in many cases, when nothing else will be. Tonics at this stage should be very sparingly admin-

istered. Bismuth and opium are used in cases where there is nervous irritability or *mania a potu*.

When the gastric disturbance has abated, a nerve and liver tonic should be prescribed. The following combination has been found useful in Dr. Kerr's hands:

℞	Tr. nucis vomicæ.,	fl. dr. ss.
	Acid nit. dil.,	fl dr. j.
	Liquor taraxici.,	fl. dr. vj.
	Tr. cardamom. co.,	fl. dr. j.
	Aq. distillat., ad	fl. oz. vj.

S. A sixth part three times a day.

The bowels should be acted upon by podophyllin or calomel.

To procure sleep and promote nervous quietude, which is often essential, narcotics should be avoided, if possible. Try the effect of a hot foot-bath at bedtime, or a good-sized towel wrung out of hot water, applied to the epigastrium, and covered over with folds of warm flannel tightly bound with a bandage round the body. The bromides are to be preferred to an opiate, and they may be combined with henbane with advantage. The addition of chloral hydrate is an advantage in intractable cases. Chloral should not be given in large doses, however. Sulphonal is serviceable, and hot and cold baths are useful.

Constipation is a very common complication, and should not be neglected. Oatmeal porridge, whole meal, and brown bread and stewed fruit (for breakfast) will keep some patients free from constipation.

Bursts of excitement and violence following an inebriate paroxysm will subside as the poison is gradually eliminated under a judicious course of digestible nourishment,

As already mentioned, an important factor in the successful treatment of inebrity is the remedying of the predisposing cause, the pre-inebriate morbid condition. Another indication is to repair the physical damage and to strengthen the will-power. By the construction of new healthy structure in the reparation of tissue, there is nothing better than good healthful food, but the food must be such as both the stomach and the duodenum can digest. The diet must be judiciously selected, and different diet is needed by different individuals.

In the selection of drinks for patients after treatment for inebriety, Dr. Kerr is very emphatic in the condemnation of all drinks that contain even 1 per cent. of alcohol. All tinctures and medicated wines are to be avoided. There must be total abstinence without any exception on either medical or religious grounds. Only unfermented wine should be used at the communion table. A sip of alcoholic liquor, even after years of abstinence, may be sufficient to relight the old crave for intoxicants.

To diminish the tendency to relapse, the will-power must be

exercised, and to this end it is imperative that every possible auxiliary be called into action. The reason must be appealed to and moral and religious influences brought to bear. "Scientific medical treatment," says Dr. Kerr, "includes attention to hygiene, to diet, to the body, brain, mind, and *morale*. Everything that can contribute to the improvement of the soul and spirit, as well as to the reparation of tissue, has its place in the medical *armamentarium*."

The will-power may be strengthened, moreover, by the mere act of taking medicine, even if it be only a *placebo*. A gentle tonic composed of tr gentian. co., acid nitromur. and tr. cardamom co., is useful for this purpose. The syrup of orange and quinine. (Beckett's) is a palatable substitute for the bitter beer of the drinker.

Strychnine pills, preferably the nitrate, gr. $\frac{1}{50}$, twice a day, is sometimes efficacious when other preparations have failed. The citrate of iron (or iron and quinine) and strychnine may also be used. Dr. Kerr, however, prefers nux vomica in these cases, as, for instance, a pill containing $\frac{1}{4}$ gr. of the extract, with $\frac{1}{8}$ gr. of belladonna, twice a day, or the tincture in five-minim-doses, with dilute phosphoric acid and aq. chloroformi, three times a day. When the liver is affected, "nux, with dilute nitric acid and taraxicum, is invaluable. An occasional dose of blue pills, followed by a saline aperient draught, will unload the oppressed viscera and relieve the *malaise*."

A well-known reformed drunkard in England took the following combination for seven months, which he found a valuable remedy:

℞	Ferri sulphat., ...	gr. v.
	Magnesia., ...	gr. iv.
	Sp. myristicæ., ...	fl. dr. j.
	Aq. menth. pip., ...ad	fl. oz. jss.

S. The draught to be taken twice daily.

With reference to the mode of administration of drugs in treating inebriety, Dr. Kerr does not resort to hypodermic medication. He has, he states, a strong aversion to "the introduction of physic under the skin."

In many cases there are diseased conditions other than inebriety present. Where this is the case these conditions must be met. There may be a syphiiltic taint, a history of malarial trouble, scrofula, anæmia or brain-fag. "Each case is a study in itself." "No two patients will be found alike."

Dr. Kerr points out the importance of early treatment in inebriety, and especially in view of the fact that in many cases the inebriety is merely a symptom of some pathological condition of the brain or nerve centres. The symptoms of disease are often manifest long before any act of drunkenness has taken place, as,

for instance, moral perversion, sleeplessness, languor, and a feeling of *malaise*. Judicious treatment at this early stage is urgently demanded. In many cases nerve-foods are advantageous, such as the phosphates and phosphites and non-intoxicating malt preparations.

Treatment by T. D. Crothers, M.D.

The following is a summary of Dr. Crothers' article on "Alcoholism and Inebriety in Hare's System of Practical Therapeutics:"* Inebriety in a certain class of cases is preceded by symptoms of melancholia or dementia. "The brain and nerve condition is one of progressive degeneration, and the drink impulse is a psychical demand for relief." These cases should be clearly diagnosed and all advice and treatment based on the facts. They are on the border-line in regard to mental and physical health, and the physician should see that measures are adopted that will make a thorough change in their present habits and non-hygienic rules of living. The causes and breeding-grounds of neurotic degeneration should be broken up. These cases should never be sent to jail or treated as moral delinquents. They require hospital or asylum treatment, and "the alcohol question will never be solved until this is done." Jail treatment is singularly fatal to this class

In a second class of cases the sudden excessive use of spirits is preceded by a chain of symptoms less pronounced, but the withdrawal of spirits unmasks the mania. They are in a state of irritation and intense activity, and partial delirium and acute delirium follows the removal of spirits requiring restraint.

A third class is the periodical drinkers. They drink to excess at certain distinct intervals. In a large proportion of these cases it is found that the parents are either insane, epileptic or alcoholic inebriates. The question of home treatment in these cases is most important—more especially during the sober intervals, which in some cases extends to many months. The diet is of first importance, as also the surroundings of the patients, the work, the climate, and strains and drains on the nervous system. The treatment is largely a question of hygiene and dietetics. Medicinally, the return of the drink-craze may be averted or partially neutralized by anticipating the date of said return and using the bromides freely a few days before the expected return of the paroxysm. The bromides may be given with impunity in these cases in 100-grain doses. Phosphoric acid or citric acid may be used. Strychnine, gr 1-40, every four hours before the paroxysm comes on is also valuable. The Turkish bath is also useful. The bowels should in all cases be acted upon freely on the first symptom of the return of the drink-storm. Rochelle salts with potassa bitart every two hours is recommended. Chloral, gr. xv., with fl.

* Dr. Crothers is editor of the *Quarterly Journal of Inebriety*, and is secretary of the American Association for the Study and Cure of Inebriety.

ext. gelsemii, ♏ x., may be combined with xl.-grain doses of soda bromide to control the paroxysm. It must ever be borne in mind, however, that the control of the paroxysm is only a small part of the treatment. The condition which provokes the paroxysm is the objective point of attack.

In a fourth class of inebriates the treatment is most perplexing, namely, young men—sons of wealthy parents—with bad mental surroundings, bad company and ignorant. In treating these cases a radical change of life and surroundings is essential. They must go in training under the care of a physician who will regulate all the surroundings and conditions of life. If this cannot be done at home, the patient should be removed to a retreat for inebriates. Of tonics, either nux vomica, gr. ¼ to 1 grain, or arsenic tablets, gr. $\frac{1}{30}$, three times a day, may be used. Quinine, or quinine and iron may be used for a couple of weeks with advantage. The diet must be regulated carefully. Lean meat properly cooked and served at regular intervals is useful with or without farinaceous diet and fruits

In a fifth class of inebriates, the inebriety is caused by overwork and general neglect of healthy living. These inebriates are from circles of business and active professional life. The drinking usually dates from some state of brain and nerve exhaustion. Except where there is an inherited disposition, such cases are largely curable. Prolonged rest of brain and nerves is necessary, however, in addition to abstaining from drink.

In a sixth class of cases the inebriety is due to brain injury, such as shocks or blows on the head. Some obscure injury antedating the inebriety makes the prognosis unfavorable. Iodide of potassium is indicated in these cases as also nux vomica, say, 10 grains of the former to 1 of the latter three times a day. Iodide of arsenic is also a useful remedy. Turkish baths massage, moderate exercise and quiet surroundings are also indicated. These cases require systematic care quite as much as cases of insanity.

A seventh class are preëminently *dipsomaniacs*. In these cases the impulse to procure spirits is literally a mania and becomes so intense as to sacrifice every consideration of sense and judgment. A strong cathartic and a Turkish bath daily, with massage, will in most cases overcome this mania. Bromides, iron, phosphorus, and cinchona are useful with a change of surroundings. Monobromated camphor in 5-grain pills every two hours has the same effect. A hot bath with rubbing is a sovereign remedy with Dr. Crothers in these cases. A pill of phosphorus ½ grain, nux vomica 2 grains, and arsenite of iron ¼ grain, will build up the system and lessen future attacks. Fowler's solution in five-drop doses three times a day is a standard remedy in these cases. In dipsomania there is profound brain and nerve lesion, and the victim, for successful treatment, requires the advantages of a well-organized asylum for inebriates.

An eighth form of inebriety is due to the degenerative changes

of old age, and is to be treated with arsenic, mercury, and iodide of potassium. The steady use of baths is useful, and is, of course, increased by hygienic changes of life and living.

I had the privilege of visiting Dr. Crothers at Walnut Lodge Sanitarium, Hartford, in February last His establishment is elaborately equipped with Turkish and other baths, which, I find, play an important rôle in the treatment of his inebriate cases. He seems to have great faith in the principle of *elimination* in the treatment of his cases. He purges and sweats them most heroically, and gets the whiskey out of his patients in short order.

The treatment of morphinism and delirium tremens does not come within the scope of this article

SOME REMARKS ON MECHANICO-THERAPEUTICS.*

BY T. J. M'GILLICUDDY, M.D.

THERE are many who would seem to believe that our only remedial agents are drugs, because, notwithstanding the decided limitations of drug treatment in chronic diseases, they are content to go on employing this method for these diseased conditions year in and year out, and often with the most unsatisfactory results. It is entirely different in acute ailments, where drugs are of the greatest value.

To those who are unacquainted with the natural remedial resources lying dormant in the organism, who know nothing of the latent powers of recuperation by which (when properly developed) health is obtained and continued, the benefits resulting from mechanical treatment often are marvellous. The value of this method of treatment is well known in the Germanic countries. Many of our physicians are gradually recognizing its importance, although the practical utilization of it is to-day in infancy in the United States. It is an undisputed fact that the lack of proper physical exercise is the cause of much debility, disease and suffering. Inactivity of both the voluntary and involuntary muscles is a violation of the laws of our being, the punishment for which nature never fails to inflict. Civilized and barbarous nations have recognized this fact and acknowledge it. Systematic and uniform physical exercise, under medical direction, stands prominent to-day as the quickest and most certain curative method of many ills, because it is in compliance with the fundamental law of our physical existence. It has been stated that "mechanico-therapeutics embrace the treatment by a properly qualified physician of the sick (chiefly those suffering from chronic diseases), the deformed, the convalescent, the feeble, the aged, and persons needing to counteract the

* Read at meeting of New York Co. Medical Association, December 12th, 1897.

effects of sedentary occupations, by means of active and passive movements, mechanical operations and manipulations executed by the hand directly upon the skin." This method depends for its value and brings about health and recovery by the utilization of these principles underlying the results that come from systematically exercising both the voluntary and involuntary muscles. Presupposing the addition of other proper dietetic and hygiene treatment, there is by this method a general strengthening and a healthful bodily development.

It is a physiological law that exercise strengthens, and that all organic development is that of gradual growth. This physical strengthening and development can only be accomplished by the systematic exercise of the muscular system, which includes about all the body except the framework, the padding and the nervous mechanism. Among the more immediate results of the curative exercise is an increase in the strength and rapidity of the heart beats as well as an increase in the frequency and depth of the respirations. As a consequence there is a more rapid circulation with an increased oxygenation of the blood, greater metabolism in the tissues and an increase of watery evaporation from the lungs and skin. The liver and kidneys are acted upon directly by stimulation of the venous flow. In the chest, abdominal and pelvic cavities there is a powerful suction on the returning venous blood due to negative pressure in inspiration, and this is increased in direct proportion to the frequency and depth of respiration. The lymph current is also quickened by the mechanical suction. The secretions of the glands are increased throughout the body and the muscles themselves are increased in size and strength; their firmness or density is also enhanced. Careful dietetic treatment is a necessary requisite, as the bodily nourishment must correspond to the exercise.

In carrying out the mechanical treatment the exercise is adapted from the beginning to the strength of the patient, and is increased by degrees only in proportion as the strength increases. If the exercise should exceed the strength, over-exertion results and permanent injuries to heart and lungs as well as the organs of movement may ensue. The functional capacity of these organs may be readily overtaxed, and here especially is where the care of the physician is required. If it were not for these dangers laymen might be entrusted in some cases with this work. Cardiac hypertrophy and albuminous urine are frequent results of over-exertion. The sudden loss of vitality also often leads to pulmonary hæmorrhages and phthisis.

When the exercise is insufficient the patient derives no benefit and atrophy and weakness still persist. It is necessary to ascertain for every patient the effort which corresponds to the different group of muscles, and which induces *normal* fatigue, and to continue to make that effort until the strength has increased and the patient feels that it is too slight, when the work is gradually in-

creased. Thus we go on developing those attenuated muscles that were undergoing atrophy from non-use, until the patient soon becomes restored to the normal physical state. By these measures we strive to cure chronic disease by regulating the circulation, digestion, secretion and excretion, and by bringing all the bodily conditions to the normal standard.

In November, 1895, in a paper read before this association, I insisted that, this work being academic, it should be in the hands of the physician and not the layman, and in the following spring, Dr. William H. Thomson made a similar observation—where mechanical treatment and manual treatment or massage is given by ordinary laymen for disease, in the majority of cases it does not meet the indications, but does no good if it do no harm. Laymen know nothing of pathology. Why, then, should we trust them with the treatment of disease? Manual treatment is a necessary part of mechanico-therapeutics. It should, however, be applied scientifically in a manner to obtain the physiological results desired from each manipulation. It would be better if the use of the word massage was discontinued by the profession because it has become debased Manual treatment is preferable as it explains itself, and it shows that it belongs to the domain of the physician. The number of those outside of the medical profession who attempt to cure every disease by massage is appalling. They have here monopolized this field and brought a most valuable means of treatment into disrepute. These individuals may do very well to give the body a general rubbing, as after a bath, but we should never allow them to treat disease manually or otherwise. They have possession of this field in this country only, and with the endorsements of those who ought to know better, they go about with great pretentions vaunting their wonderful cures. If physicians did all the manual treatment of special organs or parts and left the "general rubbing" to the nurses, they would thus get rid of formidable rivals, who are now usurping much of the province of the profession, and save to medical men a vast amount of money that is now worse than wasted on Swedish and native charlatans. We complain bitterly of the druggists prescribing for our patients, while here is a greater enemy.

The latest mushroom growth that has sprung up in the field is termed osteopathy. This pseudo-science is having considerable vogue in the west. It has a grain of truth to its bushel of chaff, and here, as elsewhere, it is our duty to seize and utilize that grain, because, if we do not already possess it, we thus add to our strength. As liberal physicians we take the good no matter where we find it. So long as it is of genuine value to the sick and suffering we adopt it, and thus we leave no excuse for the foundation of sectarian schools or "parties."

With many there is a confusion of ideas upon mechanical treatment, especially when men in gymnasiums, who ought to know a little of something about it, fail to differentiate it from sport and

from physical culture. The lack of improvement in the patients sent them would tend to show their lack of knowledge.

Mechanical and manual treatment properly given is directly beneficial in many chronic disorders, such as those of the heart, lungs, stomach, intestines, habitual constipation, hæmorrhoids, pelvic congestions, weakness of the limbs, joint affections and spinal curvatures. Not less important are the indirect benefits obtained by the general strengthening and vitalizing physical exercise. Dr. Gustaf Zandi says it would not be possible for any of the chronic maladies to develop to a high degree without diminishing the vitality of the body and the general health. This general health that finds expression in the energy with which the living organism resists external injurious influences, or in the perfection wherewith the remaining organs work together to meet those dangers to the whole organism, which are engendered by the accidental over-exertion or under-exertion of any one member, the more perfectly this health can be maintained, the more independent it renders the individual of those manifold internal and external influences which limit his mental and physical capacity. It even enables him at times to successfully endure tests to which a less vigorous nature would succumb. By prolonged or repeated illness this beneficent reaction of nature against disease is diminished, and the regaining of health is rendered proportionately more difficult. In single cases special treatment may be able to remove the original disorder, but a condition of debility continues, which exposes the patient to a relapse or new affection.

In other cases special treatment remains ineffectual, until by generally strengthening treatment the vital energies have increased and the powers of recuperation latent in the organism are again aroused to life. "The generally strengthening effect promotive of all the vital activities, which is possessed in so high a degree by systematic bodily exercise, is therefore of the utmost importance in the treatment of chronic ailments, and during convalescence after acute illness. But it is not alone through illness that the vitality is undermined. Senseless habits of life, intemperance, lack of light, air and bodily exercise, especially during one-sided over-exertion of the intellectual powers—all this consumes vitality and makes life from childhood to old age a sample book of maladies and infirmities of all sorts. It is the part of dietetic exercise to prevent this misery so far as it rests upon insufficient or one-sided physical exercise. . . . The great majority of every city population obtain through their wonted occupations a wholly insufficient or most one-sided, and, therefore, often injurious form of bodily exercise; for all these dietetic exercises are an actual and permanent necessity, as everyone must see who is in any way clear as to the importance of the muscles."

Hydrotherapy may also be included in part under mechanical treatment, as both cold and heat in the proper degree act as a stimulant or irritant to the vaso-motor system. They produce a shock

followed by a reaction, and thus exercise the muscularis of the blood vessels, and as all exercise, as I have already stated, not too strenuous, is beneficial, a strengthening and a permanent improvement of the nutrition of the body follows. Cold and heat are thus cardiac and vascular stimulants, the water being the medium of their application. Where there is weakness of the cardiac muscle, feeble circulation and weakened muscular power, these can be roused and strengthened and the bodily nutrition generally improved by the use of the bath. It should be graduated according to the strength of the patient. In those who are very feeble they should be of exceedingly brief duration so as not to cause exhaustion. If a thorough reaction and glow cannot be obtained they should immediately be discontinued. It is well always to advise the addition of a handful of salt to a basin of water in the sponge bath, and friction with brine towels afterwards to increase the irritant effect

As a *résumé* we will briefly consider some of the principal remedial effects of the employment of curative exercise or mechanical and manual treatment.

1st. To regulate the circulation. The circulation of the blood and lymph is greatly influenced by the action of the muscles. Muscular action presses the blood through the veins more rapidly: thus its progress towards the heart is greatly accelerated. In cases of muscular inactivity, these scientific movements will often produce the quickest results in restoring an unbalanced circulation to its normal condition.

2nd. To increase secretion and excretion. Where there is a great diminution of secretion or excretion, systematic curative exercise and manual treatment is of great service. It is especially useful in cases of congestion of the liver and other viscera and inactivity of the skin.

3rd. To increase respiratory power. The breathing power and capacity of the lungs can in no way be so rapidly and powerfully developed as by mechanical and manual treatment. We have known persons to thus treble their breathing power in a few weeks. I have in mind now a case of chlorosis, a girl of seventeen, who all her life had been delicate. She had been given Blaud's pills for two years without improvement. Her breathing power—or as some call it, lung capacity—at the beginning of the treatment was fifty cubic inches, at the end of four weeks it was 130 cubic inches, and in eight weeks it was one hundred and sixty (160) cubic inches. Thousands have been saved from a consumptive's grave by means of curative exercise. The lungs with their bronchi and blood vessels are mostly muscle, and functionate like the digestive organs only through muscular activity.

4th. To increase digestive power. In many chronic diseases of other organs as well as in functional derangement of the stomach, deficient muscular and digestive power of the stomach and intestinal canal may be greatly benefited and in many cases completely cured by means of this treatment.

5th. To increase assimilation. Many chronic diseases owe their cause to imperfect assimilation. It is not what we eat or what we digest that benefits us, but what we assimilate through the tissues. There is no means by which assimilation may be so powerfully stimulated and encouraged as by the careful employment of mechanical and manual treatment.

6th. To increase vital action. This method of treatment is of great service in cases of debility and general weakness and in all diseases where there is inactivity of the vital functions.

7th. To regulate muscular action. No remedy is of greater value in treatment of disordered muscular activity, as in various distortions of the spine, resulting from unequal muscular action; also in many cases of uterine displacement. In cases of paralysis no other remedy, unless it be electricity, will accomplish so much as systematic, skilful, mechanical and manual treatment.

In observations by Dr. Jacob Texhner, in treating deformities by physical development, he calls attention to certain facts:

1st. He says: "It is rapid, improvement being noticed by the patients, their relatives, and myself within a week or ten days after treatment has begun.

2nd. "The improvement in general health and the increase of weight.

3rd. "The wholesome effect upon the nervous system by the cultivation of muscular precision and endurance.

4th. "The marked increase in the lung capacity.'

5th. "The beneficial effect upon the heart's action, as shown by the diminished frequency of the pulse and the increase of pulse pressure after each treatment, as shown by Basch's sphygmometer.

6th. "That all patients continue to improve generally and muscularly long after active treatment has ceased."

CALIFORNIA AS A TOURISTS' RESORT.

BY JOHN HUNTER, M.D.

PHYSICIANS are, or think they are, or many of them wish they were, a hard worked lot. Unless it be druggists, probably few men grow old so quickly as doctors. Now, who of us, speaking from his own personal experience, will not say that a useful life is worth living and prolonging to a ripe old age. This being the opinion of every man, in so far at least as his own individual life is concerned, it naturally or rationally follows that every means available for the preservation and perpetuation of good health be utilized to the full. It is not so often the character of the work as the constancy and sameness of it that wears out both mental and physical stamina. Other vocations allow men to take periods

of rest at home, but a physician is practically obliged to get away altogether from his patients. So with benedictions for those who pay promptly, and maledictions for the other fellows, he packs his grip and bids adieu to the world of groans and anguish through which he daily treads. The question is, whither can he go? He must make his choice, since "The world is wide in time and tide." Granted that in his survey he looks away toward the Occident. C.P.R. rushed him through some of Ontario's fertile fields, and well he should enjoy them, too, for he will go many a dreary mile ere he sees their like again. Earth has few scenes where fertility, thrift and beauty are so happily combined as in Ontario. Owen Sound is reached, where palatial steamer is in waiting to float away over the cool billows of Lake Superior to Port Arthur. A pleasant run brings him to the western metropolis, Winnipeg, where a few days "solid enjoyment" may easily be obtained. Onward for days and nights the train speeds over prairies of seemingly unlimited expanse; the dazzling scenery of the Rocky Mountains exploited, and at last the long-looked-for Victoria harbor reached. Physicians being essentially non-mercenary few gaze northward to the fable gold fields of the Klondike, but turn toward that Eldorado where "jaded nature" can find repose. Steamer is taken to San Francisco, with its matchless harbor, hilly streets, great and small buildings, sunshine, fogs and sand storms, heterogeneous people, hurl-burly of commerce, fashion and folly; and in all an intensely interesting and wonderful place. There are points of interest—seashore, valley, mountain-peak, etc.—in endless variety. Moving southward along the coast we pass many gay summer resorts, each of which has its special attractions. From any of these, beautiful drives can be taken up the grain and fruit valleys: the Lick Observatory, Stanford University, etc., visited. Further south, on the sunny isles of Santa Rosa and Santa Cruz, or inland, protected from north winds, is Santa Barbara, with its salubrious climate. Here a mountain range running eastward is a dividing line between northern and southern California, and as it is to the latter that the trend of travel is mostly directed, both for pleasure and health, therefore it will be more interesting to intending tourist or invalid to have a fuller description of this "Sunland of the South." From Santa Barbara Los Angeles is soon reached: it is the business and fashionable metropolis of the South, a city of about 100,000 inhabitants, and growing rapidly. It has its beautiful avenues, parks, summer seaside resorts: in short, all the paraphernalia of modern life. It is the most western station on what is known as the "kite-shape or figure of eight" railway system. Taking a trip around this line is probably the greatest attraction of California. The run takes the tourist about seventy miles up the San Bernardine Valley, through an almost continuous fruit garden. Orange trees in full bloom during March and April, scenting the whole valley with their rich delicious fragrance, and ladened with golden fruit from October until March again. Peaches,

apricots, nictarines, pomegranates, olives, figs, raisins blossoming and ripening between February and August; rose, heliotrope, geranium, poppies, lilies and scarlet passim blooming almost perennially, but especially sweet, bright and fragrant during April and May, October, November and December. The green pasture fields of Alfalfa, clover, barley and wheat, and the vineyards rivalling the "vine-clad hills of Italy and Spain." There are many pretty towns. Pasadena, with its ostrich farm; Ontario and Riverside, with their famous avenues adorned with stately palm and cypress trees; San Bernardine, boasting of its comely municipal buildings, and Redlands, with its Memorial Library and peerless Smiley Heights The scenery, embracing the jumble of lofty snow-capped peaks, bare rock-terraced mountain sides, the luxuriant fruitful foot-hills, down into the rich ever-green valleys with their boundless profusion of trees, shrubs, grains, fruits and flowers is enchanting. The best time for the tourist to visit this southern paradise is in April, May and June, or October, November and December. He will be dazzled and fascinated by its matchless beauty.

The unselfishness of the physician lends an interest to everything helpful to others, so a few words about the "sunny south," as a health resort, the ideal climate for the sick, would be cloudless skies, warm balmy sunshine, pure air, and surroundings where everything good could be easily procured, the kindest of people, and everybody else well and able to wait on the patient. Such conditions are reserved only for the good in another world. The best we can do here is to select places relatively good. Compared with more northerly climatic conditions southern California offers many advantages. Providing a patient takes reasonable care, an exceptional flurry of snow or several frosty nights in winter do not injure him half as much as he and his friends think. If physicians would only frankly tell those whom they send away to expect vicissitudes of one kind or another, no matter where they go, a world of worry and disappointment would be saved. Invalids have been known to actually refuse to leave the boat or car because it happened to be raining at the time of their arrival, and have wandered off to a far more unsuitable place because the weather was fair when they arrived at the latter.

The atmospheric conditions in these valleys are somewhat pecular. To the north or east of them are great sandy deserts. In these, during the day, the air becomes intensely dry and hot, 120° or upwards. This hot air ascends and floats toward the Pacific Ocean, whilst a lower current passes from the ocean up the valleys, over the mountains, and rushes down to fill the vacuum in the deserts, or the currents reversed according to location of heat centre, whilst tornadoes, cyclones or electric storms are almost unknown: yet the variations of temperature are sufficient to make it always advisable to wear, or keep at easy access, woollen underclothing or extra wraps. You may go to bed with the ther-

mometer at 80° in your bedroom—all the windows open, but by 4 or 5 a.m. the mercury is hugging 28 or 30°, and you suddenly wake up and scramble for blankets to cover up your bare limbs.

The winter is the rainy season, that is, an occasional wet day or two, and then several with warm sunshine. The spring and autumn months are delightful. The summer is dry and hot in day time, but cool and pleasant in the evenings.

Southern California in autumn, winter and spring is a veritable fairyland for tourists, and at all seasons has for invalids, especially those able to take care of themselves, as favorable resorts for recuperating health as can be found anywhere else.

HOW TO HYPNOTIZE.*

BY SYDNEY FLOWER, LL.D.

It is not at all advisable that the physician who has had no experience in this line of work should plunge immediately into the middle of things by taking as his first case some one of his chronic neurotic patients. The hypochondriacal and the hysterical are the most difficult to influence, and it is always better to begin work upon three or four young, sound, and healthy people. Select, first, either children of from ten to thirteen years of age, or young men and women below twenty-one. The sex is of no consequence.

Take a bunch of five boys, seat them in chairs in your office; darken the room just sufficiently to give the idea of rest: shut out as much as possible all noises of the street, and guard against all unnecessary interruption from without. No special hour is more advantageous than another. Hypnosis may be as easily induced after breakfast as after supper.

You are now ready to begin. Tell the boys, to commence with, that you are not about to try any exciting experiments with them, that you are simply going to show them that you can put them easily to sleep in the daytime, that whether they have never gone to sleep at that particular hour before matters nothing; the point is, they will go to sleep at your bidding. Impress upon them the fact that they have nothing to fear, nothing to be alarmed about at all, because there is no difference between hypnotic sleep and natural sleep, except that in the former they will answer when spoken to without waking up, whereas in natural sleep they will awake of their own accord as soon as disturbed. Boys are fairly reasonable creatures, and as soon as you have prepared the ground and gained their confidence in this manner, you will find them willing to pay attention to what you have to say. And herein lies the essential point in inducing hypnosis—you must *secure their*

* Written specially for The Canadian Journal of Medicine and Surgery.

undivided attention. This must be done, not by reprimand, but by suggestion. It will not do to tell a boy whom you are trying to put to sleep that you can do nothing with him because he will not attend to you—you must tell him that he will go to sleep because he *is* attending to you. This will make him attend. You must impress his mind with the idea that he heeds what you say, and the result follows immediately that he *will* heed what you say. This is the fundamental truth of suggestion Tell a lazy boy that he is lazy, endeavoring thereby to shame him into effort, and you only succeed in implanting in his mind the idea that to be idle is natural to him. Tell the same boy that he is by no means lazy, but rather of a bright, quick, temperament and eager to learn, and if he thinks you mean what you say, and are not making fun of him, he will accept your suggestion and surprise you by his alacrity in putting it into practice. Give the boy the same suggestion while he is in the hypnotic sleep, and you greatly intensify its effect upon his susceptible mind. If parents and teachers generally but understood the receptivity of the subjective, or sleeping mind, we should hear less about the disobedience of children.

It is assumed now that you have brought these five boys into an attentive frame of mind. Proceed in this way. Say: "I want you now to relax all the muscles of your bodies: take all the stiffness out of them: let your arms and legs become heavy; let your hands rest on your knees: you feel now as if you didn't want to move: as if you could fall asleep quite easily. In a little while you will fall asleep, but not just yet. Fix your eyes upon the knuckle of the little finger of your left hand. Keep your eyes fastened there. Don't move them; dont' look round you. Don't pay any attention to anything but that knuckle. If it fades away from your sight, don't rouse yourself to wonder why. Take everything as it comes; quietly now, going to sleep. In a little while your eyelids will become heavy; your eyes will be tired: you will feel sleepy: sleep will steal over you: quietly now: that's very good: becoming drowsy now: eyes getting heavier: in a little while they will close tight, and you will be fast asleep."

These suggestions are to be given slowly, without any appearance of hurry or excitement. They should be uttered in a drowsy tone, and quite seriously. A seriousness which verges on severity is preferable in a first experiment. It is above all things necessary to impress your subjects with the idea that you are yourself in deadly earnest. If you give them leave to question your earnestness of purpose, you court defeat. By the time you have proceeded thus far one or two of the boys are unmistakably drowsy. Go round the half-circle now, closing the eyes of each with your hand, and say: "Sleep. You are going sound asleep. Your eyes are fast shut: tightly shut, and you cannot open them. Sleep soundly. You will hear me speaking to you, and you will answer me when I speak, but you will not wake up until I call you. Sound asleep. Eyes fast shut."

Put this test to the first boy who showed signs of drowsiness: "Your eyes are fast shut, and you can not open them. Try. Lift up on the lids; they will not open. Try hard; they remain closed. Sleep."

His eyes will not open I have yet to find a boy who is insusceptible to suggestion thus applied.

Raise his arm now, and say: "Your arm is raised: you can not lower it. It remains up. It is getting stiff and rigid. You can not bend it or lower it."

If the arm remains up, you have induced cataleptic rigidity, and the boy is in good condition for any suggestions you may have to give for his therapeutic or educational advantage.

Although it is quite unnecessary to put this cataleptic test to any subject, it is advisable to try it in order to satisfy yourself that hypnosis is really induced. But remember, that if the arm drops inert and heavy to the side in defiance of your suggestion, hypnosis is present in this case also, and a lethargic condition is evident.

You will not seek to put your subject through any of the foolish tests which the travelling professor loves to mystify his audiences with, because these things are to the detriment of the subject in the end, and serve no useful purpose at any time. What you require for therapeutic purposes is sleep—induced sleep: that deep and refreshing sleep in which there is amnesia, or loss of memory, on waking.

This is the sleep that allays fever, cures nervousness, regulates the pulse, and restores equilibrium and tone to the system—not because of the sleep alone, but because of the *suggestions* that accompany, and are a part of the sleep.

Proceed to waken your subjects in a reasonable manner. Don't tell them that when you snap your fingers they will jump out of their chairs, because you give them a shock by so doing.

Wake them gradually by saying in a quiet tone of voice: "You have had a sound and refreshing sleep: you feel better in every way: your head is cool: appetite good: health much improved: and this benefit will increase from day to day. You will not go to sleep for any one but me. No one else will be able to hypnotize you. Remember that. No one has any influence over you whatever. This is a natural sleep, and you are not in the least afraid of it. You go to sleep for me because you want to sleep. If you did not, I could not influence you. There is no such thing as controlling you against your will. You will wake much rested and better. The next time you will fall asleep after looking steadily in my eyes for a few minutes. You will become drowsy immediately and go easily to sleep. Remember the suggestions I have given you Now I am going to waken you. When I count five you will be wide awake. Quickly now—one, two, three, gradually waking up. Four: your eyes are opening. Five; you are wide awake."

The physician will find that the whole art of applying hypno-

tism therapeutically lies in the suggestions given and the manner of making them. Patience, practice and perseverance are all necessary, but I have seen within the last few years so many remarkable cures of nervous diseases and of habits which medicinal treatment was powerless to remove, that I am astonished at the general ignorance on the part of the otherwise well-informed regarding this science. There are now three schools of suggestive therapeutics in Chicago, patronized exclusively by physicians, and we may hope that the interest which is making itself felt there will extend across the Canadian border.

Dr. H. H. Oldright and Dr. G. G. Thompson, both of Toronto, have been appointed Surgeon and Assistant-Surgeon, respectively, to the Queen's Own Reserve.

The Chapter of the Order of the Hospital of St. John of Jerusalem in England, with the sanction and approval of Her Majesty the Queen, have appointed as honorary associates or members of the fourth class of the Order the following: Hon. F. W. Borden, Minister of Militia: Dr. T. G. Roddick, M.P., President of the British Medical Association: and Major John McLean, President of the Canadian Press Association. The chapter has passed a special vote of thanks and ordered it to be engrossed on vellum, to Dr. C. R. Dickson, local Secretary of the St. John Ambulance Association in Toronto. These distinctions are conferred for services in connection with the St. John Ambulance Association, the President of which is H. R. H. the Prince of Wales.

The following are the graduates in medicine this spring from Queen's Medical College, Kingston: N. W. Anderson, Kingston; C. C. Armstrong, Kingston; C. H. Burger, Kingston, Jamaica; W. F. Callfas, Kingston; G. W. Collison, Brinston's Corners; W. N. Condell, Ventnor; D. J. Corrigan, Kingston; N. A. Davis, Fallowfield, Ont.; H. H. Elliott, Frankville; U. S. Fedden, Brockville; J. E. Gage, Riverside, Cal.; Robert Hanley, Kingston; A. E. Hett, Kingston; W. H. Hills, Acadia Mines, N.S.; W. A. Jaquith, Sydenham; E. J. Lake, Kingston; H. V. Malone, Kingston; J. F. Mather, Plainfield; W. M. Moffett, Carleton Place; C. A. Morrison, Kingston; C. J. McCambridge, Kingston; C. E. O'Connor, Kingston; M. J. Pike, Sebwaing, Mich.; R. C. Redmond, Lansdowne; J. F. Scribner, Kingston; Rev. A. Grasset Smith, Deseronto; A. E. Stewart, Kingston; A. L. Tinkas, Greenbush; H. M. Waldren, Guelph; Ward Young, Odessa. Medallists—H. H. Elliott, Frankvilla; C. C. Armstrong, Kingston. The same gentlemen will be house surgeons at the Kingston General Hospital, subject to approval of the Board of Governors. Next in order of merit—A. L. Tinkas, Greenbush; U. S. Fedden, Brockville. Prize of $25 awarded for the best examination in senior anatomy, senior physiology, senior materia medica, T. H. Johnston, Stirton, Ont.

Surgery.

REMARKS ON RECTAL SURGERY.

During the course of some remarks on Rectal Surgery by Thomas Bryant—published in a recent issue of *The Lancet*—in speaking of Perforating Ulcers of the Rectum, he said, the fact that a simple ulcer may start in the rectum and perforate its walls and so give rise to a fæcal ischio-rectal abscess is well recognized, but he was not so sure that the profession as a body recognize the occurrence of a simple ulcer of the rectum perforating its walls at some higher or lower level and giving rise to fæcal extravasation with as a result septic cellulitis of the perineum, abdominal parietes, gluteal region, and scrotum in the male and external genital organs of the female. He would also add to these possibilities a perforation of the bladder in the male and of the vagina in the female subject. He said he had seen examples of all these conditions.

In 1872 he read before the Clinical Society of London the notes of two cases of recto-vesical fistula due to simple rectal ulceration treated successfully by left lumbar colotomy. One of these cases was in a man, aged sixty-four years when he underwent the operation, and who lived in comfort for six years after it and died from a ruptured heart at the age of seventy years. After death evidence of cicatricial repair of old ulceration was present in the rectum, with a very small fistulous opening between the bladder and rectum, which was still patent and through which a very little urine during life had passed at times into the rectum, but this had never been a source of trouble. The second case was of a man, aged forty-nine years, who had been passing fæces and flatus with his urine for three and a half years before he operated in 1870 and who made a good recovery. One year after operation he wrote: "No wind or fæces have passed into the bladder since the operation, although a little urine still passes into the rectum." In 1884 he wrote: "The operation has been quite successful as it has added fourteen years to my life. I am quite free from pain and I feel as strong as if nothing was the matter with me. The contents of the bowel all pass through the opening in the loin; nothing passes into the lower bowel except a little water from the bladder." Since these cases occurred he has had others to support the views they illustrate; for example, in 1882 he had a patient, aged sixty-five years, who died from pleurisy and œdema of the lung, who twelve years before had passed flatus with his urine without any known cause or any other symptom. This he continued to do for some months when he got well. At the post-mortem examination

the evidence of old ulceration of the rectum and of the former recto-vesical fistula was very clear, and there was a complete absence of any local organic disease.

About Fissure or Painful Ulcer of the Anus, he said it might have been thought since the symptoms of this affection are so characteristic that either a mistake in its diagnosis or a chance of its being overlooked were most improbable events, and yet it is true that from some cause or other such cases are too often passed over and allowed to drift. They are either regarded as piles by the patient and so treated on the patient's diagnosis by the practitioner, or the diagnosis is supposed to be confirmed if, after a superficial external examination, anything like a prolapsed internal or a swollen external pile is seen, or even a small prolapse of the mucous membrane of the bowel, or possibly a papilla-like fold of anal integument situated at either the dorsal or perineal extremity of the anus which is mistaken for a pile. Whereas to detect an ulcer a more careful examination of the part is absolutely essential, together with a greater appreciation of the value of the papilla-like fold of anal integument as a guide to an ulcer, for this fold of anal skin or papilla is one of the most constant and valuable indications of this kind of ulcer, whether associated or not with hæmorrhoidal trouble. To determine the fact of the existence of this ulcer no painful examination is either necessary or justifiable, for a painless external examination if rightly made can at once determine the question. With the patient on his side and the thighs well flexed the buttocks are separated and the surgeon with the thumb and index finger of one hand laterally draws aside the two sides of the anus and with the finger or thumb of the other hand raises or pulls down the characteristic fold of skin or papilla beneath which the presence of an ulcer is suspected, when if it be present the extremity of the ulcer or the whole ulcer will at once be seen, even if the ulcer exists alone, or is found to coexist with external or internal piles or even with a polypus, for it cannot be too well recognized that cases of piles, prolapse of the rectum and polypi when the seat of severe pain are mostly so from their being complicated with the painful ulcer; indeed, it is often owing to the grafting of this acute trouble upon an old one that the patient is induced to seek professional advice for his chronic affection. Should the ulcer be associated with piles and rectal prolapse the patient will often tell you that since he has had the severe local pains neither the piles nor prolapsed bowel have come down so much as they did formerly and that he has been able, therefore, to sit down with greater comfort, having been led by these apparent improvements to think that his piles or prolapse had taken a favorable turn; whereas the intelligent surgeon should in this report of his patient be led to a different conclusion and find an explanation of the facts which he may accept from his patient that the protrusion of the rectal trouble has lessened because the anus has become less patulous from the spasmodic

contraction of its sphincter muscle which is always associated with this anal ulcer and as a consequence lessens or forbids the prolapse which formerly occurred. Indeed, whenever a patient complains of sudden accession of anal pain in the act of defecation, and the persistence of a burning, cutting pain for a few or many minutes, or even for hours after the act; whenever a patient who has been known to have piles or prolapse suddenly becomes the victim of this intense local pain and as a consequence, seeks for relief, the presence of this trouble should be suspected, and no treatment ought to be suggested before a careful local examination has been carried out. When this trouble is grafted on to others, and piles, polypus, or prolapsus co-exist, the treatment of the recent affection should be included in the treatment of the older trouble and a cure of both should be secured.

The patient may refuse an examination with the natural dread of serious pain being excited or increased by the introduction of a finger, for he knows too well what the passage of a hard motion causes and that a liquid one is often as bad: but the practitioner can with confidence promise him that no pain shall be caused, for by careful manipulation, such as has been described, no pain need be or should be occasioned.

When the ulcer is once recognized its cure is soon brought about, if it be uncomplicated, by a forcible dilatation of the anus followed by a well-made incision through the whole length of the centre of the ulcer together with half an inch of the healthy tissue above and below its border, the incision being made to penetrate only through some of the superficial fibres of the sphincter muscle, whereas in slighter cases the forcible dilatation of the sphincter will suffice by itself. If the ulcer has been of long standing a deeper incision may be necessary than when it is of recent origin, but he claims never to have seen an uncomplicated case of anal ulcer in which the division of the whole sphincter of the anus was required. F. N. G. S.

Dr. Meyers has gone to Philadelphia to take a course with Weir Mitchell at the Nervous Clinic.

Dr. R. R. Bensley has been appointed Examiner in Physiology, Embryology and Histology by Toronto University, in place of Dr. Wright, resigned. Dr. J. B. Willmott was appointed Examiner in Medical Jurisprudence.

The University of Wooster, Wooster, O., has appointed Dr. R. D. Moffatt, 311 Parliament Street, as examiner for the various examinations leading up to its post-graduate degrees, which have been and are to be held in Toronto as required. Dr. Moffatt, being also presiding examiner for McGill University, will have charge of its annual matriculation examination, for entrance into the several faculties, to be held in Toronto early in June. This examination has advantages of which intending students should be aware.

Surgical Pathology.

THE PRACTICE OF EVISCERATION IN ABDOMINAL SURGERY AND SHOCK—AN EXPERIMENTAL AND CLINICAL STUDY.

BY DR. LOUIS TIXIER.

This summary is the result of an extended period of study, inspired by M. Bouchert—evisceration in abdominal surgery. The work was prosecuted with the collaboration of M. Geimard in the School of Veterinary Physiology, of Lyons.

The complete work occupies 350 pages, with illustrations, diagrams and tracings, showing the effects of intraperitoneal operations on the respiratory and vascular systems. The conclusions are somewhat at variance with those of others, inasmuch as it is recommended that intraperitoneal operations be performed with as much speed as possible: in fact, that success largely depends on rapidity.

The conclusions arrived at are the following:

Evisceration is the displacement outward of the abdominal contents, which might be denominated "exenteration."

Evisceration may be but momentary, and generally should not occupy more time than the condition for which it is performed.

It may be prolonged or continued when it is partial.

It may be traumatic or post-operative.

Indications for it are variable.

(a) Momentary Evisceration. In contusions of the abdomen, sometimes it may be easy.

First. It is our only resort when certainty as to the presence or absence of perforation is desirable. In delayed cases it may become a dangerous and difficult manœuvre.

Second. In penetrating wounds of the abdomen it is indispensable to determine the situation and extent of penetrations.

When the opening is small and eviseeration is early, there is not much danger. In all cases, especially where deep laceration is expected, the examination should be thorough. It is only when adhesions are firm and leakage arrested that we should desist.

(b) Traumatic Evisceration. In these cases reintegration of the damaged extrusion should be effected, the parts restored, and a Mikulicz drain inserted.

Third. Intestinal Occlusion. In chronic cases of this character it is rarely necessary to eviscerate, because, with the hand on the

abdomen, we may usually determine the site of the stenosis. But, if necessary, we should not hesitate to turn the intestines out, as the inflammatory action is languid and permits of moderate exposure and manipulation.

In acute, intestinal occlusion evisceration promptly and definitely decides the situation of the trouble. But, unfortunately, in such cases serious symptoms may be present—cardiac collapse, dyspnea, profound intoxication, the peritoneum in an irritable and inflamed condition, the intestine inflated, persistent vomiting, etc., all of which constitute a redoubtable condition.

It can only be permitted in cases seen at an early stage In neglected cases of intestinal obstruction, attended with great exhaustion, evisceration is quite out of the question, and we must be contented with making an artificial anus.

In such cases, we can rarely differentiate strangulation from invagination, but in all cases, when it is suspected that the intestine is gangrenous and there is fecal escape, the parts must be widely opened.

Fourth. In Peritonitis. Evisceration is generally contraindicated in this state, as the reflexes are hypersensitive to the slightest irritation. It is therefore only when peritonitis is localized that evisceration can be considered. When there is a small perforation it would appear proper to withdraw the bowel and repair it; but not in advanced peritonitis, for the shock may be too great, and hence, we must be content with a gauze drain, leaving the parts widely open for escape of the lethal elements.—*Poncet.* According to Jaboulay, evisceration may accomplish good results in cases of peritoneal tuberculosis with free ascites.

Fifth. In gynecology, thanks to Trendelenburg, evisceration is rarely necessary.

In cases of reintegration after laceration or gangrene of the bowel in hernia, and other condition, it may be necessary.

(c) Prolonged Evisceration may ensue from an accident, or by intervention.

Important details to observe in the operative manual of evisceration:

First. Preliminary precautions such as the proper preparation of the patient. Preparation of the room for operation. The temperature of the air should be raised to 80 degrees. It should be humid, and, of all things, care should be taken not to chill the patient. Asepsis should be always humid. This diminishes vaso-motor dilatation of the herniated intestine. We have the greatest trouble with dry asepsis; it interferes with exosmosis and is most conspicuous when we employ dry napkins.

Finally, Management of the Peritoneum. The circulatory and respiratory reflexes, from operative manipulations, offer less gravity when the intestines are enveloped in warm, moist linen, and further, moist dressings greatly diminish the prospect of subsequent intestinal adhesions and post-operative intestinal occlusion.

Anæsthetics should be cautiously used here, ether being always preferred.

Second. On the Choice of Incision. This may be made in the middle line, above the umbilicus. By this quite complete evisceration is possible, though here reintegration may be difficult

Third. The intestines should be turned out quickly in one mass, and not in segments, in order to prevent irritation of too great a surface.

Fourth. Reintegration of the extruded intestine is always a delicate, and sometimes a difficult, procedure. The use of force must in all cases be avoided, as it often determines the most serious disturbance of the reflexes. Reintegration may be facilitated by lavage of the stomach, after the method of Madelung, Rehn and Kummek, or temporary enterostomy.

Fifth. Closure of Abdominal Walls. Above all things, we must terminate our operation as quickly as possible; generally one plane of through-and-through suture suffices; though if sepsis be feared we use drainage.

Sixth. Consecutive Care. An eviscerated patient always suffers from great shock, and hence we must be on our guard for collapse and meet it with appropriate remedies, as ether, caffeine and serum injections.

The dangers of evisceration are numerous. One of them is a well-known sequel of events common to every species of laparotomy —adhesions between the intestines, rupture of the cicatrix, post-operative eventration. The others are peculiar to the operation. The greatest of all dangers is shock. The essential character of this state is an *ensemble* of functional troubles of the organs of respiration and the circulation This is produced by the peritoneal reflexes, and may readily be brought about experimentally.

The respiratory reflexes impress the arterial pressure, the heart and pulse.

Invariably, we notice in the animal anæsthetized, after the abdomen is opened, a fall of the arterial pressure, with a weakening of the pulse.

The respiration becomes shallow and irregular. This is powerfully influenced by the state of the peritoneum.

When the peritoneum is healthy the vascular and respiratory organs show no signs of disturbance for from six to ten minutes after evisceration. Beyond this period the peritoneum becomes more and more irritable. The divers functional troubles are more or less independent of each other: as, for example, in some we may have evidence of a profound vascular depression without pulmonary implication, and *vice versa*.

The surgical deductions which we derive from these physiologic disturbances are extremely interesting.

1. In all intra-abdominal interventions we must fear the effects of peritoneal irritation, the redoubtable reflexes of which reduce the patient to a state of shock.

2. The dangers of infection we may obviate, but the nerve phenomena resulting from reflex irritation of the peritoneum cause a state of great gravity.

3. In the healthy individual the danger of shock in evisceration is slight, provided we do not occupy more than ten minutes.

4. In patients in whom the peritoneum is diseased the danger is vastly greater.—*Lyons Med., Dec. 20, 1897.* T. H. M.

A FEW BRIEF NOTES ON THE MORBID ANATOMY OR ESSENTIAL ELEMENTS OF TRUE TUMORS.*

In the preceding sections of the study of tumors or tumor-like formations, having dwelt chiefly on the clinic features and similar characters of heterogenous masses, in many particulars bearing a close resemblance to neoplastic elements, it now remains, with the limited space at our command for the remainder of this year, to enter on, as fully as possible under the circumstances, the subject of true tumors: the benign, as is generally understood: the malignant and that large class, which both histologically and clinically occupeis middle ground, the mixed.

Here, at the threshold of our undertaking, the pertinent question is pressed on us—What is a tumor anyway?

This would seem a question easy of solution and readily answered by any tyro in surgery. It is one, however, which has not been answered yet, although there are endless definitions: for, many phases of pathologic transmutation or degeneration are wanting in the physic features of what would support the derivation of the term: inasmuch, as there is no augmentation of volume, but a destructive advance and a final obliteration of the organ or structure first seized on.

Nevertheless some working scheme, as a nosologic basis, must be adopted, though the usual definition is rather relative than positive.

This confusion and obstacle were fully realized by Delbet in the opening chapter of his and Le Dentu's late superb and exhaustive work, when he declared, "that the study of neoplasms is one of the most obscure and difficult in the whole range of pathology, for while the immortal discoveries of Pasteur and his disciples scattered far and wide a brilliant light on a number of maladies, neoplasms remain enshrouded in an impenetrable obscurity, as, in spite of the accumulated efforts of many, we yet know nothing definite of either their pathology or etiology. Our knowledge is limited to an acquaintance with their evolution and morbid anatomy only."†

*Extract from series on "Tumors." *Medical Times and Register*, Oct. 17th, 1897.

†Pierre Delbet, Traite De Chir., Par. M. M. Le Dentu et Delbet. Vol. I., p. 393, 3.

Ranvier defined a tumor as "any new mass, constituted by a new formation, manifesting a tendency to persistent increase." To this Heurteux added: "Any or all masses composed of new elements, having a tendency to increase independently of inflammatory action." Quenu, one of our latest and ablest authors on oncology, defines a tumor as "a new formation, distinct from all inflammatory processes." Delbet tells us that a tumor is "a neoformation constituted by a new tissue, engendered by super-activity of the cellular elements, which has for its character a typical development more or less permanent." Definitions might be multiplied without in any manner further solving the question: for all which I have have seen are defective and vulnerable, and are not one whit more truly descriptive than Percival Potts' plain, laconic and homely description, viz., that "a tumor is a swelling that kills, generally painful, highly vascular, the malignant always ulcerating."

In order to intelligently pursue our studies of the common origin and the natural history of tumors, something like a systematic classification is desirable. This may be reduced to two divisions, viz., a clinic and an anatomic separately: but, for all ordinary purposes, the latter will suffice, except when we commence to separate in a general way the benign and malignant.

The basis of the division here submitted, will be anatomic and histologic: the classification of the microscopic elements being on the lines of my former teacher, the celebrated anatomist and pathologist, the late Dr. Carl Heitzman. This is the most natural and rational, as it quite entirely conforms with the principles of those investigators, who deny the production of any really new tissue elements in any tumor, contending, as Green puts it, that "there is no element foreign to the normal tissue cells in any growth, as the prototype of all may be found in the healthy tissues of the body."

Cohenheim's doctrine of the embryologic origin of tumors has made its impress on the classification of many modern authors; but, as the German pathologist's theories have not received the unreserved support of the greater number of authorities and are in direct conflict with Virchow's views and Sir James Paget's conclusions, it has been decided to submit such an arrangement here of the various groups, as will deal particularly with anatomy, speculation and theorizing aside, thus steering clear of conflicting conclusions on the question of what part, if any, the primordial structures the mesoblast, the epiblast, the esoblast, and the blastemic structures play, as etiologic factors in fetal existence. T. H. M.

Dr. W. B. Thistle is taking the house at present occupied by Dr. Peters, on College Street, as soon as vacated.

Dr. Geo. A. Peters, we understand, intends building this summer on College Street, next door to the Bible House, in the Irving Walker property.

Pharmacology and Therapeutics.

PERONIN, A SUBSTITUTE FOR MORPHINE.

THE name "Peronin" has been given to a salt of the formula $C_4H_5NO_3$, HCl, $C_{17}H_{18}NO_2O$, C_6H_5, CH_2, HCl. It is in the form of a voluminous white powder, easily soluble in water, and insoluble in alcohol, chloroform, or ether. It is intended as a substitute for morphine.

According to the investigations made thus far by Drs. Von Mering, Schroeder and Nockus, peronin acts somewhat weaker than morphine, but, on the other hand, exhibits the unpleasant by-effects of the latter in a far less degree. Its use is particularly recommended in the troublesome coughs of phthisis and bronchial catarrh; and in asthmatic affections, as well as in rheumatic and neuralgic pains, it also exercises an excellent, calmative effect.

The dose of peronin is about two or three times greater than that of morphine. A single dose would therefore be from 0.02 to 0.04 gm., the maximum single dose 0.06 gm., and the maximum daily dose 0.2 gm.

Dr. Schroeder ("Therap. Monatsh," XI. p. 4) has used it in eighteen cases of phthisical coughs in patients of both sexes, and compared its effects with those of cocaine. He gave it for seven days in constantly increasing doses of from 0.02 to 0.4 gm., and found that the irritation causing the cough was in the majority of cases immediately alleviated. Expectoration was, as a rule, not affected, nor was any gastric disturbance observed. In all cases, peronin induced a better and calmer sleep, without causing any preliminary excitement. In a few exceptional cases, after larger doses of the drug had been given the patients complained the following morning of headache and general lassitude, which symptoms, however, are much more frequently observed to follow the use of morphine.

Since peronin is almost as bitter as morphine and codeine, it is recommended that it be given in pills or dissolved in syrup or in sweetened water. The following are said to be good formulas for its administration:

1. Peronin ..... 0.3 gm.
   Powd. extract licorice.
   Powd. licorice root .....of each sufficient.
   Make 30 pills. Dose: Two to four pills at night.

2. Peronin ..... 0.5 gm.
Distilled water ..... 100 gm.
Dose: Teaspoonful at night.

3. Peronin ..... 0.1 gm.
Distilled water ..... 150 gm.

4. Peronin ..... 0.3 gm.
Alcohol ..... 5 gm.
Distilled water ..... 50 gm.
Syrup ..... 100 gm.
Dose: Teaspoonful three times daily.

MENTAL SUGGESTION.

BY S. HERBERT BRITTON, M.D.

EVERY doctor knows from experience something about the power of the mind over the physical functions, for all of us use mental suggestion unconsciously every day. I have recently been reading Hudson's "Law of Psychic Phenomena," and I find it a wonderful book. I believe it is the duty of every physician who desires to keep abreast of the times to read this book. I first read a most fascinating book entitled "Hypnotism: Up To Date," by Sydney Flower, LL.D., of Chicago. This book sought to elevate the science of hypnotism above the proverbial country schoolhouse exhibition of psychological wonders, to rescue it from what we might call the "Black Art," and give it a wider and more worthy scope. Then, too, Mr. Flower has dispelled much of mysticism which has always hung around the subject of hypnotism. He should be honored for that; indeed, he has made this to appear to be only a simple God-given power to anyone who is worthy of using it right. He has made it a power for good of universal application. Thanks to Sydney Flower.

Now, I noticed not long ago that Mr. Flower seems to have no doubt, judging by an article of his in his magazine, that the time to educate children against bad habits, and in fact carry on a great part of their instruction, is while they are *asleep*. This was a new idea to me, but I could not think a man who could write such captivating articles as Mr. Flower could be very much wrong. So I resolved to try it at my first opportunity.

My little three-year-old daughter had, since an attack of whooping-cough, a most troublesome incontinence of urine. We gave her drugs, implored her, punished her (something I am sorry for), and did all that we could to cure her. It seemed that everything was useless. I had concluded that time alone would cure her, but after reading Mr. Flower's article on the education of children during

their sleep, I took courage. I talked to her during a quiet sleep, and suggested "Blanche will not wet herself any more." I repeated this in her ear very distinctly, and said it over and over. I also suggested that she would not wet the bed any more. I told her how sorry her mamma and papa were when she did it, etc. Now, it must be remembered that this habit was so bad that the child was at no time in the day presentable when anyone wanted to see her. Her mother was invariably compelled to see to her clothes before allowing her to see them. I was therefore very much astonished to notice soon after the first treatment that she did not repeat the soiling of her clothes. "But," I said, "it must be a coincidence," and let the matter drop for that time. The freedom from enuresis continued from day to day, and I, of course, continued my treatment at intervals, and must say that it is now over two weeks since she has been troubled in the least. Here was an instantaneous and complete cure.

I am inclined to ask, "Is mental suggestion so powerful as this?" I really think, if it is powerful with any, it would be so with children. But I shall await the result of other trials. Yet I can never cease to wonder at the above result. It, of course, might be called a coincidence: but even then it is a wonderful coincidence. I advise any physician who reads this to try this matter for himself.

I believe we are only on the threshold of psychology, and that the next ten years will develop far greater wonders than we have yet seen in a psychological line. Let us see the results of your experiments, whether they fail or not. Failures are sometimes as valuable as successes, in some respects. I will say, while I am on this subject, that I am experimenting, as I have opportunity, in this matter of mental suggestion, and that I recently made an inglorious failure to hypnotize an old female neurasthenic who had refused to let anything cure her, and that I promptly reported the same to the *Hypnotic Magazine*.

Personally, I want to say in conclusion, that I am very much inclined to believe in telepathy as a means of inter-communication between the subjective minds of people. That is, I am inclined to believe Mr. Hudson's hypothesis explains mental phenomena most completely, and that we are only in the infancy of psychology. At any rate, hypnotism as a therapeutic measure has come to stay, and it cannot be ignored by the medical profession. As I have said before, when it comes to the fact that a patient can be blistered with a postage stamp, we ought to study the new psychology. Then anyone who will read up on the subject can see for himself that the method of hypnotic suggestion is by far the most potent of any treatment yet devised for the drink habit and the morphine habit, etc.—*Exchange*. A. J. H.

Dr. Charles Cuthbertson has given up his Bay Street office entirely, and will concentrate his work on Wilton Crescent.

Public Health and Hygiene.

PROVINCIAL BOARD OF HEALTH.

THE Provincial Board of Health met at Dr. Bryce's office, April 19th, at 10.30 a m. Dr. Macdonald (chairman), Dr. Bryce (secretary), Dr. Cassidy, Dr. Vaux and Dr Kitchen were present.

After the minutes of the first quarterly meeting had been read and adopted, the Secretary announced that the American Public Health Association would meet at Ottawa on September 27th of this year.

Correspondence was then read relating to the sanitary condition of Cardinal and Iroquois, on the new Williamsburg Canal. President Geo. F. Benson, of the Edwardsburg Starch Company, drew the Board's attention to the state of affairs at Cardinal, where Davis & Sons, large employers of labor, were engaged upon the new cutting. The large influx of navvies had caused a great deal of overcrowding, and the absence of proper sanitary conditions made Cardinal a dangerous place during the hot season. In his letter Mr. Benson said: "I wish to call your attention to the fact that in one house that I know of there are practically in the neighborhood of twenty people, over half of whom are navvies, whom a man with an already large family has undertaken to board In this same house, and cooped up in a comparatively small room, there are four double beds accommodating eight men. One of these men has the measles, and the smell of the room and building is most objectionable."

Continuing, Mr. Benson said, "Measles, combined with whooping cough, had become epidemic in the neighborhood Country people did not consider measles dangerous, and took no trouble to isolate the cases. If by any chance small-pox were to break out, the situation would be serious."

Dr. Bryce and Dr. Vaux were appointed a special committee to deal with the matter. An effort will be made to locate the navvies in tents during the summer time.

The water supply at Iroquois, with which the Board has been dealing for some time, was discussed by the Board in Committee of the Whole. A letter was read stating that the Water Supply Company had not yet taken any steps to improve the supply, which was still taken from the old canal, which drained five miles of territory, several villages and manufactories. A sample taken from the canal in mid-winter showed much impurity, which would be increased when the ice melted and the surface water ran in. Then the screws and wheels of steamers would stir up the animal

matter in the summer time and the warm weather would cause a great increase of bacterial life, and might lead to a serious outbreak of disease.

After a lengthy discussion, the following resolution was adopted:

"(1) That the Council of the village of Iroquois take such steps as shall cause at once the extension of the intake pipe to the pure waters of the St Lawrence.

"(2) That in view of this urgency, the Local Board of Health of Iroquois be instructed to at once give formal notice to the Water Company to supply, within a definite reasonable period, the town with a safe public supply under the Act, requiring it to abate nuisances and remove insanitary conditions, as the Board is empowered to do under the Ontario Health Act.

"(3) That the Local Board be notified, in case action is not taken by it, to have this danger to the public health removed within a reasonable period: that the Secretary of the Provincial Board of Health will be instructed to have such legal steps taken under the Ontario Health Act to have the insanitary condition above referred to removed, as may be found necessary in the public interest."

A report on a proposed water works system for Rat Portage was considered. The intake pipe is to extend out 1,000 feet into the Lake of the Woods where the water has been proved by analysis to be very pure. At present, and until the new system is constructed, the town water supply is pumped from above the town by a hand-pump.

An outbreak of diphtheria was reported from Parry Sound, and differences of opinion between physicians as to the diagnosis of the disease had led to conflict between the Medical Health Officer and the attending physicians. It was the opinion of the Board that, when a difference of opinion arises, in such cases the bacteriologist should be called on to decide the true nature of the disease.

The City Council of Chatham and the Township Council of Delaware both protested against the pollution of the River Thames by London sewage. Dr. Bryce explained that the proviso by which the sewage works of London were approved of, set forth that London should put its sewage, when the works were completed, on a sewage farm: but in the meantime, during the construction of the system, London was obliged to use the river.

At Berlin the Board of Health and Council are at loggerheads over the employment of an inspector. The regular officer appointed by the Council has too many other duties to perform to permit of efficiency. The Provincial Board supported in the most positive way the position of the Local Board, and drew attention to its right to employ a proper inspector, and send in the account to the Berlin Council.

The question was asked from Essex Centre as to the length of

time scarlet fever cases should be isolated. It was the opinion of the Board that authority under the Act to state the length of time was conferred on the Medical Health Officer in the first place; secondly, on the Local Board; and lastly, on the attending physician where a Medical Health Officer was not appointed.

Secretary Bryce was appointed to visit Leamington, and report upon the best method of securing proper drainage and sewerage.

The action of Dr. Porter, of Chicago, in shipping the body of a scarlet fever victim to Toronto, where an outbreak occurred, came up before the Board. Dr. Arthur R. Reynolds, the Commissioner of the Chicago Health Board, in writing about the occurrence, said Dr. Porter had evidently betrayed his confidence in ascribing the cause of death to heart failure, when the real cause was scarlet fever, heart failure contributing.

H. C. Doan, V.S., wrote from Zurich in reference to a disease in cattle, supposed to have been caused by eating turnips. The disease had died out when the farmer ceased feeding turnips to the cattle. The Secretary reported that experiments, made in the laboratory of the Board, had not shown that the turnips were poisonous.

Correspondence was read from the Local Board of Health of Goderich, regarding analysis of specimens of urine, and complaining of neglect to send reports. The opinion was generally expressed by members of the Board that the bacteriologist of the Board should not be expected to do analytical or bacteriological work, unless the same related to public health.

The Board met April 20th, at 10.30 a.m. Among the correspondence submitted was a letter from W. J. Hodgins, of Bonfield, near North Bay, regarding the recent outbreak of diphtheria in that village. Mr. Hodgins was able to say that the disease was now confined to his own house. It had been brought to them by a young school teacher who came from Mattawa. The epidemic was an extremely interesting one, as it had been started by a seemingly mild case, and from it three deaths and several serious cases had resulted.

A communication from Mr. C. R. Sing, of Meaford, was read, submitting a plan for a proposed new cemetery for the town. The Board approved of the plan, and will authorize Mr. Sing to lay out the cemetery.

An analysis of Lake Erie water, near the village of Port Colborne, was considered preparatory to the laying by the Council of a water works system. The water was found quite pure enough for use, and the plan approved of, subject to the Board's satisfaction regarding the position of the intake pipe.

The artesian wells of Mount Forest were next discussed, and the analysis of their water was found extremely satisfactory. It was resolved that the water could be used subject to the proviso that the location of the wells be shown to be free from the danger of surface pollution on subsequent analysis.

From the village of Hintonburg, near Ottawa, came a plan and communication regarding a proposed new sewerage system. The sewage, according to the plan, will be piped to a point beyond the Chaudiere dam, and will therefore not be dangerous to the city of Ottawa. The village, however, is also formulating a water works system. The matter was left for action to the Committee on Sewerage.

A deputation from Guelph, consisting of Mayor Hewes, Alderman Howard, Alderman Kennedy and City Engineer Hutcheon, was present in the afternoon, and exhibited plans of a proposed sewerage system for the city. It is proposed to filter the sewage through sand. The consideration of the plans was deferred.

Mr. Van Buskirk, of Stratford, was present with plans for a proposed change in the disposal of sewage at Stratford It is proposed to erect a couple of precipitation basins with subsequent filtration of the effluent through a bed of coke breeze three feet in depth: the sludge to be removed and placed on agricultural land.

The Board approved of the system, subject to the proviso that the Council should supply sufficient assistance to guarantee the efficiency of the filtration.

The quarterly report of the Board was presented by Dr. Bryce. The answers to a set of questions sent out by the Provincial Board to the Local Boards were included in the report. He stated that, generally speaking, the Boards send in their accounts to the Local Councils, and that very seldom was any grant made to them at the beginning of the year: 32 per cent. of the Local Health Officers reported that they received salaries, though most of them were merely nominal ones: 71 per cent of the replies stated that the Medical Health Officers were appointed annually, and 10 per cent. were appointed at pleasure. The membership of the Boards was now composed of ratepayers, who are not members of the Local Council, and so the Local Boards had become more independent in in their action than formerly. These answers are from 285 replies received to circulars sent out to 479 Medical Health Officers

Speaking of the working of the Ontario Health Act, during the fifteen years since it came into force, Dr. Bryce said that, as far as the organization of effective public health work in the Province was concerned, the results were somewhat disappointing, though not discouraging. One cause of this, upon which he laid stress, was the fact that the Medical Health Officer is, in most cases, appointed annually, and is, therefore unable to take forceful measures, as he might endanger his reappointment. In fact, the method of appointment, the length of tenure and the salary paid made the position of a Medical Health Officer a simple anomaly and absurdity. As remedies for these evils, he recommended: (1) The enlarging of the sanitary district, so as to permit adequate payment for services: (2) the training of the officers in the various branches of applied science; and (3) permanency of tenure of office.

The Board met April 21st, 10.30 a.m.

The Guelph sewerage plans were approved of, with the proviso that the sewage effluent be kept in a satisfactory condition.

Dr. Cassidy read a report on the comparative vital statistics of Toronto and Montreal, in Canada, and Chicago and Philadelphia, in the United States.

The report was adopted.

The Rat Portage system of water works was approved of, provided the intake pipe be extended southward into the Lake of the Woods 1,000 feet, and farther, if the necessities of the case should require it later on. No sewers are to be allowed to discharge in this vicinity.

The Town Council of Lindsay requests permission to extend a sewer pipe into the Scugog River, which runs through the town. The request was granted on condition that the new sewer pipe be laid inside the old brick sewer, and made to discharge a considerable distance down the river.

A report by Mr. Mackenzie, bacteriologist, was read, asking that an assistant be appointed in the laboratory. The report was adopted.

Correspondence was read relating to an outbreak of measles at Collingwood, and the Secretary was instructed to send a reply to Dr. Stephens, of Collingwood, telling him to inform the Local Board and Council that if sufficient funds were not supplied to the Local Board to deal with the outbreak, the Provincial Board would take the necessary steps to stamp out the disease at the expense of the municipality, as provided under the Ontario Health Act.

In connection with an outbreak of measles in Newcastle the Secretary was instructed to take the necessary action to prevent spreading.

The complaint from the Napanee Board of Health regarding the town dumping ground was found to be well grounded. The Secretary was instructed to request the Local Board to obtain a dumping ground in a more sanitary position.

The second quarterly meeting was then declared adjourned.

J. J. C.

REGULAR MEETING OF STATE BOARD OF HEALTH, LANSING, APRIL 8, 1898.

The State Board of Health met in regular session at the office of the Secretary at Lansing, and the meeting was called to order by President Frank Wells, of Lansing. The other members present were: Judge Aaron V. McAlvay, of Manistee; Prof. F. G. Novy, of Ann Arbor; and Secretary Henry B. Baker.

The regular business of auditing bills and accounts was transacted.

This being the Annual Meeting and the time for the President's address, Mr. Wells thanked the members of the Board for the

courtesies they had shown him during his service as President; thanked them for the aid they had given him in connection with his duties, and congratulated the members on the important advances they had made. Continuing, he said: "It is a recognized law that bodies in motion move through lines of least resistance, that a road once travelled is more likely to be again travelled than a new one in a similar direction, and that we are all prone to get into ruts, from which it is difficult to extricate ourselves. It was perhaps with this knowledge in view, and with a hope that the attention of this Board might sometime be called to special lines of work, which otherwise would have been overlooked by it, that an address from the President of the Board was made a feature of each annual meeting. In complying with this requirement to-day, I find it impossible to discover any ruts from which the Board should be pried out, or roads they should discontinue to travel." He congratulated each member on the regular and special meetings he had attended during the year. The greater part of the President's address related to the outbreaks of typhoid fever along the St. Clair and Detroit Rivers—at Port Huron, St. Clair, Marine City, Detroit and Wyandotte—especially the recent one at the city of St. Clair. He was emphatic in his belief that the Board should enter upon a more thorough investigation of the waters of St. Clair River, with a view to ascertaining, if possible, where, when, under what circumstances, and how the river is contaminated: whether the contamination is intermittent or constant; what is the result of dredging the sewage sludge out of Black River at Port Huron: and whether the contaminations which constantly enter the river at Port Huron find their way into the water supplies of the cities along the river; and under what circumstances such contaminating material finds its way into the water supply of Detroit. The questions are of vital importance to the citizens residing along the St. Clair and Detroit Rivers, and such investigations would be of inestimable value. The President said he knew that the funds at the disposal of the State Board were inadequate, but he hoped that the Board would see its way clear to pushing the investigation at least far enough to learn the importance of such work, when, if it proves to be as important as he thought, the Legislature would undoubtedly do as they have in other States, make provision for having the investigation properly made.

The Secretary of the Board mentioned that he had had several samples of water from the river examined—from the river as it leaves Port Huron, from the river opposite the intake at St. Clair, from the water works in St. Clair, from a tap in St. Clair, and from the river as it leaves St. Clair. All of the samples were found to be contaminated by disease-producing germs, and all but one promptly caused the death of animals, and that one made them sick.

For the purpose of supplementing this work, he had urged the Mayor of Marine City and the President of the village of Algonac to act under Act 43, laws of 1897, for having the water at their respective places tested at the university at cost. He had also

urged the Engineer of the Detroit Water Works and the Health Officer of Detroit to have daily bacteriological tests made of the water supplied to that city. He also hoped that the State Board would take some action.

On motion, the Board voted to authorize the expenditure for such investigation of a sum not to exceed $200.00, to be expended at the discretion of the President and Secretary, if it is found practicable to make the investigation as outlined.

The President and Secretary reported progress in the different lines of preparation for the Quarter-Centennial Celebration of the establishment of the State Board of Health, to be held in Detroit, August 9th, 10th, 11th. It is proposed to make this meeting the most important sanitary convention ever held in Michigan.

Dr. Novy, in behalf of the special committee to whom was referred the question of Teachers' Sanitary Bulletins, reported that the proposition was an excellent one, and the educational value of such bulletins will be great. It is proposed that these bulletins be issued to teachers, with a view to keeping the educational forces throughout the State in constant touch with the results of recent sanitary research

Prof. Novy, in behalf of the special committee to whom was referred the question of the relative efficiency of disinfection by sulphur fumes and by formaldehyde, made a written report of a very thorough experimental investigation, which will make room-disinfection much more easy and less destructive of valuable articles. His work included twenty-six room disinfections, and the use of five thousand specimens of twenty different species of germs that were exposed and afterward cultivated. The disinfection was performed in a specially-prepared room, containing 1,000 cubic feet of air space, and as near as practical air-tight. He found that when 150 c c. (about 5 fluid ounces) of commercial 40 per cent. formalin were distilled into a room containing 1,000 cubic feet of air space, all moist disease germs were killed Heretofore, obstacles to the general use of formaldehide have been the great cost of the apparatus for using the paraform or the formalin for regenerating formaldehyde, and the unreliability of the action of apparatus for generating it direct from wood alcohol. Professor Novy has devised and used a very simple and inexpensive apparatus for distilling commercial formalin into a room through the keyhole. Formalin can be purchased for about fifty cents a pint. Five fluid ounces will suffice for the disinfection of 1,000 cubic feet of air space. The disinfection of the room can be effected without entering the room, the apparatus being outside the room, where it can be watched, and the danger of fire inside the room entirely obviated. Dr. Novy's work is very valuable. His report will be printed in pamphlet form and widely distributed, in order to educate the teachers and people of Michigan in the methods for such disinfection. This work will be an important step by the State Board, because of the simplicity, cheapness and effectiveness of the method.

REPORT OF DEATHS FROM CONTAGIOUS DISEASES IN ONTARIO FOR THE MONTHS OF FEBRUARY AND MARCH, 1898.

PREPARED BY P. H. BRYCE, M.A., M.D., DEPUTY REGISTRAR-GENERAL.

FEBRUARY, 1898.

Total Population Reporting.	Total Municipalities Reporting.	Total Deaths Reported.	Scarlatina.	Rate per 1,000 per Annum.	Diphtheria.	Rate per 1,000 per Annum.	Measles.	Rate per 1,000 per Annum.	Whooping Cough.	Rate per 1,000 per Annum.	Typhoid.	Rate per 1,000 per Annum.	Tuberculosis.	Rate per 1,000 per Annum.
1,519,768	553	224	15	0.1	38	0.3	9	0.07	10	0.07	19	0.1	133	1.0
67	74													

MARCH, 1898.

1,462,924	501	197	26	0.2	27	0.2	4	0.03	1	0.008	10	0.08	129	1.0
64	67													

Population of Province 2,263,492

Municipalities of Province 745

Proceedings of Societies.

TRINITY MEDICAL ALUMNI ASSOCIATION.

THE sixth annual meeting of the above Association was held on the 6th of April, 1898, in the Education Department, Normal School, Toronto. The president, Dr. Elias Clouse, in the chair; Dr. H. C. Parsons, Secretary.

Routine business was first taken up, including the consideration of reports from the Secretary-Treasurer and Auditor, and the election of officers, which was followed by Dr. Vaux, jun., of Brockville, giving an abstract of his thesis which had been awarded the Alumni gold medal. The subject of the thesis was "Indol. Indican and Indigo-blue."

Dr. F. Le M. Grasett next presented a very practical paper, entitled, "Some Surgical Diseases of the Rectum." The essayist, among other conditions, touched upon fistula, prolapse, and dwelt at some length on hæmorrhoids. Considerable discussion followed especially over the treatment of the latter. Opinion seemed pretty evenly divided on the merits of the ligature and the clamp and cautery, respectively.

The afternoon session opened with a paper by Dr. Henry Howitt, Guelph, on "Some Points in Abdominal Surgery Relating to Intestinal Obstruction." The paper was well received, and elicited considerable discussion.

Dr. Leroy Milton Yale, of New York read a very instructive paper on "The Care and Modification of Milk for Infants."

Dr. Charles G. Stockton, of Buffalo, after passing some eulogistic remarks on Dr. Yale's paper, presented his own on "The Nature of those Joint Affections usually called Rheumatism." It was regretable that time would not permit discussion of this able paper.

The meeting now adjourned to attend convocation at Trinity University for the conferring of medical degrees.

The evening session opened at 8.30 at the Rossin House, Dr. Elias Clouse, President, in the chair. Nearly one hundred members, with their guests, sat down to a superb banquet. The occasion was enlivened by Glionna's orchestra, and by Mr. Edwin Rood, an entertainer from New York. When justice had been done the viands and the toast to the Queen was drunk, the audience heartily singing the National Anthem, the President presented his address, in which he briefly recalled reminiscences of college life in Old Trinity, especially of his own class. He also touched upon the uninterrupted progress of the Association, its

motives and objects, and upon the trend of public opinion, as manifested at present by an increasing demand for gratuitous medical services, and the disposition on the part of legislators and the lay public to deprecate medical legislation. Next, the toast to "Canada," was proposed by the first Vice-President, amidst the strains of "The Maple Leaf Forever." Mr. E E. Sheppard responded in his usual happy way. The President now proposed the toast to "Our Guests," the orchestra playing "The Star Spangled Banner." This brought to their feet Dr. Yale, of New York; Dr. Stockton, of Buffalo, and also Dr. O'Reilly, of Toronto. The next toast was to the President-elect, Dr Howitt, of Guelph, the audience singing, "For he's a Jolly Good Fellow." Dr. Howitt responded, thanking the Association for the honor they had done him in electing him President. "Old Trinity" was responded to by Dean Geikie, in a characteristic speech, Dr. Bingham and an undergraduate responding for the graduates and undergraduates, respectively. The toast to the "Ladies" was responded to by several gentlemen of extensive knowledge of the subject. Then the audience joined hands around the room and, amidst the strains of the orchestra, every voice was raised in "Auld Lang Syne," and thus ended by consensus of opinion the most successful year that the Association has ever enjoyed E C.

Dr. Beausoleil, President of the Canadian Medical Association, has received from the French Government the decoration of Officier d'Academie, in recognition of his services to education.

The new emergency Branch of the Toronto General Hospital has been located on Bay Street, just below the Robinson House. Permits have been issued for the necessary alterations to the buildings now occupying the site.

Dr. J. Hunter, of Dovercourt Road, expects to be able to return from California, where he has been all winter attending a brother who was very ill, some time this month. The doctor will resume practice at once in the west end of Toronto.

An aseptic vaccine bulb, which we think is so great an improvement as to warrant special mention, has been invented by Dr. Seel, of the Pocono Biological Laboratories. It is simply a miniature Sternberg bulb. Only one end is sealed, so that heat cannot destroy the vaccine, as it is very liable to do when both ends are sealed—*e.g.*, in the tubes of the New York Board of Health. There is no need of blowing the vaccine through a rubber tube, with the possibility of infecting it, not by the expired air, but by the sputum, moustache, etc. For using, the point is broken off and the vaccine forced out by the flame of a match applied to the bulb, or even by the heat of the hand. It is a happy thought.—*Phila. Med. Jour.*

The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

VOL. III. TORONTO, MAY, 1898. NO. 5.

Editorials.

INTESTINAL OBSTRUCTION.

IN the treatment of marked cases of this lesion the surgeon renders an important service by making an abdominal incision, and removing, if possible, the obstacle to the passage of the contents of the bowels. Recently, at a meeting of the Alumni Association of Trinity Medical College, we listened to a paper on this subject by Dr. Howitt, Guelph, Ont., and were favorably impressed with his methods and the management of his cases. The methods recommended were: Preliminary lavage of the stomach, free

incision of the abdomen, evisceration of the intestines, enveloping them in cloths wrung out of warm water, search for the lesion and removal of the same. Where gaseous distension of the bowel interfered with success, the operator incised the bowel in a transverse direction, to permit the escape of gas, fæces, etc. The wounded intestine was sutured, the eviscerated intestines returned, the operation wound cleaned, and the peritoneum and the abdominal walls sutured. A drainage tube was introduced at the lowest part of the abdominal cavity, protruding through a small opening made in the abdominal wall. This was generally removed in twenty-four hours. Some of Dr. Howitt's operations were done in small rooms in country houses, in which the conveniences were of the rudest description, and yet the results were quite satisfactory. Dr. Bingham, who discussed the paper, observed that in cases of intestinal obstruction the use of enemata was sometimes persisted in for too long a time He instanced a case in which copious enemata of turpentine and water had been given, which had been retained. On making an incision into the peritoneum the turpentine and water flew up into his face, having evidently escaped through a rent in the intestine.

As an instance of one of the unusual causes productive of intestinal obstruction the writer of this article recalls a case resulting from the compression of the bowel near the ileo cæcal valve by a large hydatid cyst.

An unusual case of obstruction in the practice of Dr. Barzy, Paris, was recently reported to the Anatomical Society of Paris The patient was operated on the same night on which he was admitted to the hospital, an artificial anus on the right side being made. He died of syncope three days after the operation. The three most remarkable symptoms in this case were: 1. "Rapid onset of the attack, beginning with a violent pain in the left iliac fossa, extending all over the abdomen; 2. extreme pallor of the face: 3. subnormal temperature, 96.4 , and pulse 120. At the autopsy the viscera were found anæmic, and in the abdomen a reddish mass was found, filling the hypochondriac, lumbar and iliac regions of the left side. The descending colon had been pushed over to the right iliac region, and was the intestine upon which the operation for artificial anus had been performed The above-mentioned mass was made up of accumulated clots, and, in evacuating them, the gentleman who made the autopsy found, at the origin of the left external iliac artery an aneurism as large as a hen's egg, which had burst

into the abdomen and caused the accidents of intestinal obstruction presented by the patient. Recently, at a meeting of the National Society of Medicine of Lyons, France, Dr. Berard presented a specimen of the intestines of a female patient, who had entered the hospital December 12th, 1897, for intestinal obstruction, lasting twelve days, and particularly acute for five days Her general condition was precarious, and the cause of the obstruction difficult to diagnose. Dr. Berard performed colotomy with immediately favorable results. On the following day the patient complained of a severe pain in the left side of the thorax. A diagnosis of pneumo-thorax was made, and on thoracentesis, 200 grams of a fetid liquid were withdrawn. Next day an operation for empyema was done, and a sanious fluid, containing small fecal masses in suspension, flowed from the opening.

At the autopsy a diagnosis of diaphragmatic hernia was made: 1.40 metre of the large intestine was caught in an artificial opening situated in the middle of the left leaf of the diaphragm. The hernia appears to have occurred some time after an accouchement, which took place one year before the obstruction. At that time the patient had an attack of orthopnœa, lasting three days, without any intestinal phenomena. On account of the inflammatory accidents it was not possible to say if the hernia had a pleuro-peritoneal sac, or if the intestine was caught in an opening which did not possess a serous covering.

As germane to this subject, and of great practical importance we refer our readers to the interesting work in abdominal surgery done at the School of Veterinary Physiology of Lyons by Drs. Tixier and Geimard, a resume of which by Dr. T. H. Manley appears at page 259 of this issue. J. J. C.

FORMALDEHYDE DISINFECTION.

Experimenters in Europe and America continue to devise new forms of apparatus for disengaging this disinfecting agent. In Berlin, Germany, Schlonmann and Elsner have proved that the disinfecting action of formaline is developed in a more energetic way, when the rooms to be disinfected are filled with an atmosphere of steam. In order to obtain this atmosphere they add to formaline a mixture of water and glycerine, which are vaporized simultaneously with the formaline.

By this method, sterilization is accomplished after three hours' exposure. In this short space of time the experimenters have sterilized pus, a layer of horse dung about half an inch in thickness and cloths soaked in virulent cultures, which were placed in the room. When using this method, it is not necessary to plug the doors and windows.

The essential feature in the Schlonmann method is the disengagement of watery vapor in the state of steam, which brings the active agent formaldehyde into close contact with the objects to be disinfected, and maintains this effect. It is likely also that the formation of paraformal is prevented, and that all the available formaldehyde is distributed through the room, by the agency of the steam, without undergoing solidification.

After experimenting with many different kinds of generators, Dr. Behm, of the Department of Health of Chicago, claims to have obtained good results, by simply causing the vaporization of the 40 per cent. solution of formaldehyde from sheets suspended in the room. We quote from the Bureau and Division Reports, March, 1898: "Ordinary bed sheets were employed to secure an adequate evaporating surface, and these, suspended in the room, were simply sprayed with the 40 per cent solution through a common watering pot rosehead. A sheet of the usual size and quality will carry from 150 to 180 c.c of the solution without dripping, and this quantity has been found sufficient for the efficient disinfection of 1,000 cubic feet of space. Of course, the sheets may be multiplied to any necessary number.

"Cultures, both moist and dry, were exposed for five hours in these experiments; some in sealed envelopes and others wrapped in three thicknesses of sheets or folded inside of woollen blankets. Of the former none showed growth after seventy-two hours' incubation, while the growth was but slight in those wrapped in the blankets. Surface disinfection was thorough, while a much greater degree of penetration was shown in these experiments than that secured by any other method.

"The evolution of the gas from the sprinkled sheets is exceedingly rapid, so much so that it behooves the operator to vacate the room in a very few seconds, while, after starting the ordinary generator, he may remain ten minutes or more without serious inconvenience. When the room is opened after five hours, the density of the gas is still so great as to preclude respiration, until after doors and windows have been opened some little time. On

the other hand, the air is respirable, within a very few minutes after the sheet has been removed, and there is no lingering smell of formaldehyde for days after, as is the case where the gas is evolved by the action of heat. This is due to the fact that a minimum of paraform is produced, in the evaporation of the solution in this manner at the ordinary temperature, and this is retained in the meshes of the fabric, instead of being precipitated on surfaces to be slowly converted into the gaseous form through several days."

The increased disinfecting power of formaldehyde, when combined with watery vapor, reminds one of the same feature in sulphur fumigation. It would seem as if the atom of formaldehyde or sulphurous acid required to be carried on the wings of watery vapor and to be absorbed into the meshes of cloth, or be deposited on surfaces, etc., where its bactericidal power is to be put into operation. From the results, obtained by Schlonmann with hot watery vapor combined with formaldehyde, and the equally satisfactory experiments of Behm with cold watery vapor combined with formaldehyde, we may conclude, that the presence of watery vapor is a useful adjunct in disinfecting apartments when the 40 per cent. solution of formaldehyde is used. The extreme simplicity of Behm's method, should its efficiency be completely proved, ought to give an extraordinary impetus to the work of disinfection, and consequently to the limitation or stamping out of infectious diseases. J. J. C.

TRANSMISSION OF INFECTIOUS DISEASES BY THE ATMOSPHERE.

In *Zeitschr. f. Hyg. u. Infections*, Krankh, 1897, vol. xxvi., p. 273, E. Germano gives the results of his researches on the resistance of bacteria to desiccation, and consequently on the possibility of their transportation in a virulent condition or the reverse by the atmosphere. After having explained the behavior in the presence of desiccation of the vibrio of cholera, the bacillus of plague, and the bacillus of cerebro-spinal meningitis, the author summarizes the results of all his observations in the following manner:

From the standpoint of resistance to desiccation pathogenic bacteria may be divided into three groups:

1. The first group comprises the vibrio of cholera, the bacillus

of plague and the bacillus of typhoid fever. These belong to the category of fixed viruses, for they offer a feeble resistance to desiccation in dust, in which they disappear almost completely after twenty-four hours. Their transportation by the atmosphere in a virulent condition is no longer admissible. Everything seems to favor the opinion, that the bacillus of influenza and the gonococcus behave in the same manner.

2. The second group comprises the streptococcus the bacillus of diphtheria and the pneumococcus They offer greater resistance to desiccation, and this resistance varies with the origin of the culture. Generally, however, we may consider them as fixed viruses, in the sense that their transportation by the atmosphere in a virulent condition does not ordinarily take place. However, under certain conditions, they may act like a volatile virus, that is to say, they may be transported by the air in a virulent condition, a circumstance which would explain the appearance of sporadic cases of erysipelas or diphtheria. Perhaps, also, in certain forms of epidemic pneumonia the pneumococcus becomes a volatile virus.

3. The third group comprises the intracellular diplococcus, the agent of epidemic cerebro-spinal meningitis, which offers a strong resistance to desiccation, and beside which, from the point of view of this resistance, may be placed the bacillus tuberculosis and the staphylococcus. The question of the conditions under which infection by the staphylococcus and tuberculosis may be transmitted by the air is not yet solved. However, if the infection of wounds occurs by immediate contact, one can understand how staphylococci, dried but still virulent, may be transported by the air and fall on a wound or objects in contact with it. With regard to tubercular infection, it had already been concluded from negative experiments on animals, that aerial infection in man is impossible. According to Germano this conclusion is not quite exact, for it is possible that in man, or, at least in certain individuals, the respiratory passages are more accessible to tuberculosis than the respiratory passages of animals. J. J. C.

THE MEDICAL TREATMENT OF INEBRIETY.

THE subject of inebriety has long been under discussion, but until recently it has been treated as a failure in the fulfilment of one "jot" of the moral code, rather than as a disease curable by medical treatment. The temperance enthusiasts have long appealed to the

emotions, often citing cases pathetic enough to bring "a tear from the heart of a stone." Still many homes of the people have remained haunts of vice and poverty caused by this terrible drink curse: the Prisons and Houses of Correction have remained crowded year in and year out by the victims of alcoholism. But happily, by the strenuous efforts of some in our community, who have brought the full light of medical science to bear upon this subject, The Prisoners' Aid Society of Toronto has decided that it would be well worth an endeavor to give the imprisoned inebriates at least one chance to reform, this chance to be founded on reason, *via* correct medical treatment. If our readers will peruse carefully the very interesting article by Dr. A. M. Rosebrugh, in this issue of the JOURNAL, they will gain a comprehensive knowledge of the method of treatment proposed by him and at present under consideration. Certainly it will (if the necessary legislation is passed) cost the Government a good round sum to pour costly remedies down so many thirsty throats; but if even half the percentage of those treated are really cured, it will mean a saving of funds eventually, for drunkards reappear on frequent "farewell tours" to our prisons and a "positively last appearance" would refresh the weary eyes of our Police and County Court judges, and prevent the further neeessity of providing lodging, food and filtered water.

W. A. Y.

PHYSICAL TRAINING IN THE PUBLIC SCHOOLS.

To whom does the world owe a living? is a question that has been tersely answered by some one—"To children and idiots." To children it owes more than a mere living, it owes, a training—mental, physical and moral. Until very reeently the highest ambition of our scholastic institutions has been to turn out a race of "little kid cute 'uns," their cerebral faculties crammed with nondescript knowledge, their memory "the thing they forget with;" yet the educationalists deemed this unriveted helmet coat of mail enough to wear during all the battles of after life. But, happily, ideas have changed, and to a great extent the "cramming" system has been abandoned, and the physical training of the scholars has now become of almost equal importance with the mental. How many lives have had to write the word *failure* as a *finis* to the book of life, simply because of physical infirmity brought about by over-study? The idea of physical training was well understood by

the Greeks and Romans, who insisted upon the physical side of the child being first developed and the mental nature afterwards. The Inspector of our Public Schools in Toronto has chosen the happy medium of joining forces and developing the mental and physical natures of the pupils slowly and carefully at the same time.

For the fuller and freer development of the pupil, we thoroughly believe in holidays Ignorant or thoughtless parents have been heard to say they saw little use in so many holidays, the children only got into mischief, and were better in school; forgetting, surely, that on the dial plate of a life's years there has been allotted an hour whose chime tells—"a time to laugh."

The present system of our school management is, therefore, to be congratulated upon its wise generosity in granting the long summer months for holidaying, and giving Dame Nature full charge as schoolmistress: what wonderful lessons she will teach, studies forever a beautiful memory of wood, mountain, and the mysteries of the great ever-restless sea. As the years go by, instead of an army of round-shouldered, spectacled, pert-visaged youngsters, a new race of sturdy young Canadians, strong and sound "in wind and limb," will take their places: standing erect, towering skywards, a living monument to the honor of good physical, mental and moral educational culture—pillars of brass "crowned with lily work."

W. A. Y.

NEWSPAPER PUBLICITY.

THE following is a clipping recently taken from one of Toronto's evening papers:

"A FEAT IN SURGERY.

"DELICATE OPERATION PERFORMED SUCCESSFULLY AT TORONTO GENERAL HOSPITAL.

"A delicate and, at the same time, extremely dangerous operation has just been performed at the General Hospital. The patient, Mrs. Ferrier, of Islington, a sister of the Superintendent of the Industrial School, had been ill for a long time, and a short time ago was removed to the hospital, where she was found to be suffering from a dangerous cancer. An operation was decided upon, and on Saturday Dr. Cameron, assisted by Drs. Aikins and Godfrey, removed the cancer by cutting away a considerable portion of the patient's breasts. The cancer was in a position which necessitated delicate handling to escape cutting certain important cords. The operation was very successful and the patient is doing well."

Now, where is this thing going to end? Are we to have a description of our cases, medical and surgical, with perhaps photographs of the patient and attending physician or surgeon, shoved into the daily newspapers on every occasion, to satisfy the idle curiosity and morbid tastes of the public, and thus bring us down to the level of advertising charlatans? We say emphatically, No! Let us put down our foot firmly and at once, and let those whose names have already been soiled in this way take the initiative. Let them sift the matter thoroughly and find out where to attach the blame; interview the editors of the daily press, telling them that the medical profession as a whole denounce such practices, and are above advertising their "wares" in this way. So let us in Canada keep our noble calling clean. If we cannot succeed in it, step down and out; do not drag it with us in the dirt. The profession are nauseated at such methods Should we find ourselves sinking, release our hold and thereby allow the profession at least to remain on top. W. H. P.

THE AMERICAN MEDICAL ASSOCIATION, DENVER MEETING, JUNE 7th, 1898.

The following letter has been received from our esteemed *confrère*, Dr. J. M. Beausoleil, of Quebec, who was honored last year by being elected to the Presidency of the Canadian Medical Association, and we take pleasure in publishing it. It fully explains itself, and we feel sure that any member of the Canadian Medical Association, who avails himself of the invitation to attend the American Medical Association meeting at Denver next month, will be more than repaid: W. A. Y.

306 McPhee Building,
Denver, Colo., March 15th, 1898.

Dr. J. M. Beausoleil, President Canadian Medical Association, Quebec:

My Dear Sir,—I am requested by the local Committee of Arrangements for the coming meeting of the American Medical Association, which will be held in Denver on June 7th to 10th next, to extend to you and the members of the Canadian Medical Association a cordial invitation to attend this meeting. Great interest is being taken throughout the United States, and this promises to

be one of the most successful meetings of the American Medical Association which has ever been held. Special trains are being arranged from many of the eastern cities to bring the delegates to Denver at that time, and the railways are heartily taking up the matter and promising enthusiastic co-operation to make the occasion an unqualified success. The opportunity will be an unusual one for those desirous of seeing the great health resorts of Colorado and the Rocky Mountains under favorable circumstances and at very much reduced cost.

Delegates from Canada may feel assured that the members of the profession in Denver and Colorado will heartily welcome them to this meeting, and will do all in their power to make their excursion an enjoyable one. Visitors from medical societies outside of the United States are invited to register without fee and to exercise all the privileges of membership, except, of course, that of voting. We hope that the Canadian Medical Association will be represented by a very large delegation.

Will you please see that some notice of this invitation is sent to the members of the Association throughout the Dominion, so that they may feel assured of a hearty welcome if they come and are properly introduced by your Society.

I remain, dear sir, yours very truly,

(Signed) EDMUND J. A. ROGERS (McGill),
Chairman Committee on Foreign Invitations.

MEDICAL ORDERS FOR THE ARMY OF INVASION.

ANTICIPATING the service the army will be called upon to perform in Cuba, Surgeon-General George M. Sternberg, of the American army, has issued from Washington a circular of instruction to medical officers giving directions for obtaining the highest sanitary conditions in camp life. It will be of interest to our readers to know what some of the recommendations are. They include the following:

"That when practicable camps shall be established on high and well drained ground, not previously occupied.

"Camps should be changed to fresh grounds every ten days or oftener.

"Troops should drink only boiled or filtered water and coffee or tea (hot or cold), except where spring water can be obtained which is pronounced to be wholesome by a medical officer.

"Whenever a case of yellow fever occurs in camp, the troops should be promptly moved to a fresh camping ground located a mile or more from the infected camp. No doubt typhoid fever and probably yellow fever are frequently communicated to soldiers in camp through the agency of flies.

"It is for this reason that a strict sanitary police is so important.

"When called upon for duty at night or early in the morning a cup of hot coffee should be taken.

"In decidedly malarious localities from three to five grains of quinine may be taken in the early morning as a prophylactic, but the taking of quinine as a routine practice should only be recommended under exceptional circumstances." W. A. Y.

THE AMERICAN RAILWAY SURGEONS' ASSOCIATION.

THE approaching meeting of the American Railway Surgeons' Association, which will be held in Toronto this year, promises to be a magnificent success. The exhibits will be shown in the gymnasium, which is immediately in the rear of the Convention Hall in the Educational Buildings, St. James Square A great many of the most prominent surgical instrument houses of the United States, as well as our own country, have written for space. The attendance of members will, it is expected, eclipse, in point of numbers at least, the meeting which took place at Galveston some years ago. It is fully expected that nearly every Railroad in North America will be represented at the meeting either by its official surgeon or by proxy. The Local Committee of Arrangements are very busy at present considering plans for the entertainment of the visitors, and it is expected that the Arlington Hotel will be headquarters during the few days of the convention. W. A. Y.

MEDICAL COUNCIL ELECTIONS.

THE election for representative to the Eleventh Territorial Division (Toronto, west of Yonge) in the Ontario Medical Council took place last month. The contestants were Dr. A. A. Macdonald and Dr. J. Spence. The contest waxed warm and both parties did considerable work in their own behalf. The result showed a majority of six in favor of Dr. Spence, the official returns being:

Dr. A. A. Macdonald	85
Dr. J. Spence	91

W. A. Y.

The Physician's Library.

The Surgical Complications and Sequels of Typhoid Fever. By W. W. Keen, M.D., LL.D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia, Vice-President of the College of Physicians of Philadelphia, etc. Based upon tables of 1,700 cases compiled by the Author and by Thompson S. Westcott, M.D., Instructor of Diseases of Children, University of Pennsylvania. With a chapter on "The Ocular Complications of Typhoid Fever," by George E. de Schweinitz, A.M., M.D., Professor of Ophthalmology, Jefferson Medical College; Professor of Diseases of the Eye, Philadelphia Polyclinic; and as an Appendix, "The Toner Lecture," No. V. Philadelphia: W. B. Saunders. 1898. Toronto: J. A. Carveth & Co.

Of all diseases which the general practitioner need most fear, typhoid fever can take nearly first place Not till ten days after the temperature has become normal is the patient to be considered safe or out of danger of complication of one kind or another setting in. Dr. Keen's book, after careful perusal, will be of the greatest assistance to the medical attendant in removing worry from such a source during his treatment of typhoid fever at any of its stages or in any of its varied manifestations. The book is most clear and concise, and printed in the usual perfect manner characteristic of the publishers The origin of the work was the fifth Toner Lecture, delivered by the author in 1876, on "The Surgical Complications and Sequels of the Continued Fevers," and which was a year or so after published by the Smithsonian Institution. Since then Dr. Keen has taken up the subject, from a much more complete standpoint, and gives, with the assistance of Dr. T. S. Westcott, his experience tabulated upon the basis of 1,700 cases. In different chapters, Dr. Keen discusses Typhoid Gangrene, Typhoid Affections of Joints, Typhoid Abscesses, Typhoid Hematomata, Typhoid Parotitis, and many other less common complications of this dire disease. The book is well illustrated, and shows most careful work in every detail. Plate III. of Necrosis of the Cricoid Cartilage is simply perfect, standing out in bold relief. The work is worthy of a place in any medical library.

Pasteur. By Percy Frankland, Ph.D. (Wurzburg), B.Sc. (London), F.R.S.; Associate Royal School of Mines; Fellow of the Institute of Chemistry, Professor of Chemistry in Mason University College, Birmingham, etc., and Mrs. Percy Frankland, authors of "Micro-Organisms in Water," etc. New York: The Macmillan Co.: Toronto: Tyrrell & Co. Price, $1.25.

Some men achieve greatness; Pasteur was one of them. The medical world reveres to-day the very name of this undaunted

master worker. On the occasion of Pasteur's jubilee celebration, Lister, representing the Royal Society, said: "Truly, there does not exist in the entire world any individual to whom the medical sciences owe more than they do to you. Your researches on fermentation have thrown a powerful beam, which has lightened the baleful darkness of surgery and has transformed the treatment of wounds from a matter of uncertain and too often disastrous empiricism into a scientific art of sure beneficence. Thanks to you, surgery has undergone a complete revolution, which has deprived it of its terrors and has extended almost without limit its efficacious power."

It is of this Pasteur, the student of unlimited energy and supreme concentration, that this concisely-worded volume tells, as man and scientist. The book becomes of absorbing interest as the reader is allowed to follow the worker step by step through his mazy chemical researches, which are found to be but the devious paths by which science revealed to the master mind her strange secrets. Nothing can be more inspiring than to read how this student attained success. Born of the people, but blessed with a thorough education and a clear intellect capable of the highest cultivation, his eagerness to achieve and capacity for work were marvellous. Honored by the world at large because of the practical results to humanity of his discoveries, respected in death, as on through the centuries, many will pause to read the simple words, "*Ici repose Pasteur.*" W. A. Y.

Accident and Injury: Their Relation to Diseases of the Nervous System. By Pearce Bailey, A.M., M.D., Attending Physician in the Department of Correction, and to the Almshouse and Incurable Hospitals; Assistant in Neurology, Columbia University; Consulting Neurologist to St. Luke's Hospital, New York City. New York: D. Appleton & Co. 1898. Toronto: George Morang, Traders' Bank Building.

We are not aware of any other work dealing, as this one written by Dr. Bailey does, with nervous affections resulting from injury. There are many cases which the surgeon has to deal with and in which the question of liability on the part of large corporations forms a most important consideration. It is in such instances that this well-written book will be of marvellous assistance. That such matters are not understood as they should be by medical men is proved every day in the court of law, where sometimes most contradictory medical expert evidence is submitted. The author has certainly conferred a benefit upon his confreres in giving a book wherein facts of personal experience, embodying his views and deductions in connection with so-called traumatic neuroses are given in a clear and concise manner. The first part of the volume is concerned with the simple method of examination, the causes and effects of acute organic injuries to the nervous system, and a consideration of "in how far accidents may be held responsible for

the appearance of certain chronic degenerative diseases." The question of malingering is also considered, but not much space is given to treatment. The subjects of neurasthenia, hysteria and like affections are gone into in a very clear manner. The work as a whole is one fraught with interest to all medical men, especially to those who are frequently called upon to give so-called "expert" evidence.

Atlas of Methods of Clinical Investigation. With an Epitome of Clinical Diagnosis and of Special Pathology and Treatment of Internal Diseases By Dr. Christfried Jakob, formerly First Assistant in the Medical Clinic at Erlangen. Authorized translation from the German. Edited by Augustus A. Eshner, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic: Physician to the Philadelphia Hospital. Eighty-two colored illustrations upon sixty-eight plates, and sixty-four illustrations in the text. Philadelphia: W. B. Saunders. 1898. Toronto: J. A. Carveth & Co.

It has always been a well-known fact that the Germans have the ability of turning out most beautifully executed plates for illustration purposes, so that that alone will render the translation of Dr. Jakob's work most valuable to the American reader. True, there are quite a number of works on clinical medicine, but in this one the profession have a book which is exceedingly practical and thoroughly readable. The translation, as done by Dr. Eshner, has been free rather than literal, thus "conveying the spirit rather than the language of the original." There is no doubt that if the reproduction of the book in English receives anything like the reception it did in its mother country, more than usual success awaits it. We admire exceedingly the delicate coloring of the plates in the section on clinical microscopy and chemic color reactions. They are most beautifully executed, more so than those representing diseases of the lungs, which, if anything, are not so fine, and have not had the same attention to detail given them. The book is within the reach of all, and is worth considerably more than the price charged for it.

Medical Annual and Practitioners' Index. A Work of Reference for Medical Practitioners. 1898. Sixteenth year. Bristol: John Wright & Co., Stonebridge. London: Simpkin Marshall, Hamilton Kent & Co. Toronto: J. A. Carveth & Co.

Among the contributors to the 1898 Annual are Herbert W. Allingham, F.R.C.S, Fletcher Beach, M.B., James Cantlie, M.A., F.R.C.S., Harry Fenwick, M.D., F. de Havilland Hull, M.D., Colcott Fox, B.A., F.R.C.P., Priestly Leech, M.D., G. Lane Mullins, M.A., M.D., Joseph Priestly, M.D., and A. H. Tubby, M.D., M.S., with twenty others just as well known. The publication of "The Medical Annual" each year has come to be quite looked forward to by many practitioners as being an essential part of the yearly

addition to their library. This book is full of the most recent additions to the science of medicine, as well as surgery, every year making it better, more readable, and still more indispensable. The publishers' idea of getting out an index of "The Annual" from the year 1887 up till the present is capital, and will be welcomed by practically every subscriber. A department which will be found exceedingly useful this year is that on "The Bacteria Pathogenic in Man," written by Mr. S. G. Shattuck, of the Royal College of Surgeons. The plates illustrating this department are very finely executed, and will add very materially to the interest evinced. To all medical men who take any interest in medical jurisprudence, the report of the legal decisions which affect the medical profession will be found exceedingly useful and worthy of careful perusal.

The International Medical Annual and Practitioners' Index. A Work of Reference for Medical Practitioners. 1898. Sixteenth year. New York: E. B. Treat & Co., 241-243 West Twenty-Third Street.

This ever-welcome work is full of good things in all the departments of medicine. We notice with pleasure that the work of our collaborators Messrs. McKenzie and Galloway, on the treatment of chorea, is referred to.

Probably the most attractive feature in the present volume is the Atlas of the "Bacteria Pathogenic to Man," by S. G. Shattock, F.R.C.S., of the Royal College of Surgeons Museum. The accompanying illustrations will, when completed in the next issue, form a complete atlas of the pathogenic bacteria. On looking over the list of contributors, one is easily convinced that with such collaborators, each of whom is a specialist of note, any advance in treatment in medicine, surgery, gynecology, or any branches into which the *ars medendi* is now divided, will be recognized and described. The "Annual" is equally suited for the desk of the specialist or the general practitioner. If, through motives of economy or lack of time, one does not read current medical literature, the perusal of the articles in this volume will put one abreast of the therapeutic achievements of 1897. On the other hand, an industrious reader of the medical journals of last year will find in the monographs of this volume useful and interesting memoranda, which had quite escaped his notice. J. J. C.

Scribner's Magazine. Published monthly. Chas. Scribner's Sons, New York. Price $3.00 a year.

Contains the following articles in the May number: Undergraduate Life at Wellesley, by Abbe Carter Goodloe; illustrations by the Misses Cowles, C. Allan Gilbert, E. C. Peixotto and B. J. Rosenmeyer, and from photographs by Partridge. The King's Jackal, in four parts, Part II., by Richard Harding Davis: full-page illustration by Charles Dana Gibson. Georgina, a poem, by Charles Henry Webb. The Story of the Revolution—The Burgoyne

Campaign and Its Results, by Henry Cabot Lodge, senator from Massachusetts; illustrated with drawings by Howard Pyle, E. C. Peixotto, F. C. Yohn, H. C. Christy, and with portraits and documents. The New Reporter, a newspaper story, by Jesse Lynch Williams. Two sonnets, Paganism, Reminiscence, by Francis Charles McDonald. The Workers, the West. III.—In the army of the unemployed, by Walter A. Wyckoff; illustrations drawn from life by W. R. Leigh. The Hunting-Call of Spring, a poem, by Marion Couthouy Smith. Some Bicycle Pictures, drawn by A. B. Frost—snow riding; a bit of bad road; coasting; misery; a terror of the road; a June afternoon. Red Rock, a chronicle of reconstruction, chapters XVII.-XXI., by Thomas Nelson Page; with illustration by B. West Clinedinst. A Bargain, a poem, by Theodosia Pickering. The Point of View—The romantic element in American fiction; sorrow's crown; the plague of inefficiency. The Field of Art—The lesson of the photograph.

Flint's Encyclopedia of Medicine and Surgery. Second (1898) edition, 1555 pages, revised with the assistance of fifty-six contributors, and thoroughly in line with recent advances in medical science. Cloth, $5.000; leather or half morocco, $6.00.

As the name implies, this work is a compendium of the practice of medicine, with descriptions of the more common and more important surgical operations, together with articles on gynæcology, diseases of children, and diseases of the eye and ear. It is likely to be useful to a practitioner who wishes to have ready access to a work containing the opinions and practices of leading specialists in any of these different branches of medicine. The articles are pithy and, needless to say, quite modern. Treatment is the most important feature in the work, homœopathic symptomatic indications being given as well as allopathic treatment. This feature ought to make Flint's Encyclopedia useful to homœopaths, eclectics and allopaths.

At page 582, top of the page, second column, in the article on "Gunshot Wounds," the following statement appears: "Apertures of exit are cleaner and *smaller* than even the ball which made *it*. Entrance is *everted, larger* and *lacerated*." This is evidently a mistake.

The volume is printed on thin paper and not being bulky, is convenient for use in the office. J. J. C.

The Quarterly Journal of Inebriety. Hartford, Conn.

This quarterly is published under the auspices of the American Association for the Study and Cure of Inebriates. The subscription price is very reasonable, and it is generally to be regretted that it is not in more general use by the temperance agitators who try to make life suitably miserable for plain people in Ontario. The journal is thoroughly sane, and never plays to the gallery.

The cause of the professional abolitionist, as a money-making organization, will probably continue to make money as long as blind bigotry and ignorant fanaticism can be appealed to; but the humanitarian cause of temperance will never, we think, make any solid ground until the subject is approached in the sane and scientific spirit maintained by this excellent journal. We commend it unprovisionally, not only to the general practitioner, but also to the laity. E. H. S.

The Psychical Correlation of Religious Emotion and Sexual Desire. By James Weir, jr., M.D., Louisville, Ky. $2.00.

This work contains, besides the initial essay included in the title, a number of interesting papers on scientific subjects. The opening monograph, to the publication of which the author says he has been incited "by the commendations of three of the most eminent critics and editors of magazines in the United States," deals ostensibly with a subject which can hardly be said to be altogether new to the alienist, and in a manner which certainly has nothing new in it. To even the casual observer, this correlation, if unprejudiced, must be a foregone conclusion. The author has collected a considerable mass of evidence, which will be very useful. The essays on Occultism, Hypnotism and Suicide will be found of interest. E. H. S.

A Compendium of Insanity. By J. B. Chapin, M.D. Philadelphia: W. B. Saunders.

This little book will certainly find a very large constituency at once among the student class at the universities, where a general outline of the subject in as small a space as possible, and put in the clearest terms, has always been greatly in demand. Indeed, we think that some might be found who are no longer students, whose usefulness would be greatly enhanced professionally by the careful perusal of just some such little manual as the present one. There are a number of plates, though it is extremely doubtful if photographs will ever prove of use in familiarizing the student with any of the clinical details of mental disease. E. H. S.

The American Journal of Insanity. Baltimore: Johns Hopkins Press.

This great quarterly, which is published under the auspices of the American Medico-Psychological Association, is now entering upon its fifty-fifth year. In its pages for more than half a century will be found a history of the modern enlightenment in the treatment of the insane, a movement of which its original publication was perhaps an indication, and one with which it has always kept pace, or for which, rather, if a term from the world of sport may be used, it has for many years "set the pace." In the sumptuous dress which the Johns Hopkins Press has given it, one cannot but

foretell a brilliant career for this standard publication, which, after many victorious battles, has many battles to fight. E. H. S.

Drill Regulations for the Hospital Corps, United States Army. Published by the permission of the Surgeon-General, U.S.A. Cincinnati, O.: The Pettibone Bros. Mfg. Co. 1897.

As the name would indicate, this booklet consists of the drill regulations as enforced by the United States Army. It includes "Detachment," "Alignments," "Marchings," "Turnings," etc. The most interesting part to the medical man is that dealing with the manual of the litter, giving fullest instructions as to the use of this *improvised ambutance*. The pamphlet will prove most useful to medical men connected in any way with the militia.

The Alienist and Neurologist. St. Louis, Mo.

This journal enters upon its nineteenth year with an opening number of about two hundred pages. Like the foregoing, it is a standard publication, and indispensable to the student of nervous and mental diseases. It should be more generally taken than it is by libraries of a more or less scientific nature. Indeed, it is unfortunate that not a greater number of the general profession should interest themselves in this very important branch of research. E. H. S.

Practical Military Instructions and Drill Regulations for National Guards and Military Schools. Compiled from authority by Lieut. W. R. Hamilton, U.S.A. Reno, Nevada: Nevada State *Journal* Print. 1895.

To anyone desiring quite full information in matters of drill regulations, we can recommend this pamphlet. It is written clearly and concisely.

Pamphlets Received.

"Quarterly Bulletin of the Michigan State Board of Health," Lansing, Mich., April 15th, 1898.

"The Truth About Cigarettes," read and discussed by the Medico-Legal Society of New York. Clark Bell, LL.D., editor.

"Internal Cerebral Meningitis Chronica." Notes on Diagnosis and Treatment. By Elmore S. Pettyjohn, M.D., Alma, Mich.

THE will of Mr. Ernest Hart shows the personal estate of the net value of £12,114. With the exception of a few small legacies to relatives and servants, he bequeathed his estate to his wife.

Items of Interest.

"A BRIEF FOR THE CIGARETTE."

THE paper cigarette, against which so much has been said and written, has an able champion in W. H. Garrison, whose address on the subject before the Medico-Legal Society at its last meeting attracted considerable attention. The current issue of the *Medico-Legal Journal* contains the full text of this paper, entitled "A Brief for the Cigarette," and in it Mr. Garrison has brought a strong array of facts to shatter what he termed the "unreasonable prejudice which at present exists against the paper cigarette," and was certain that the investigations of professional men of science would only emphasize the results at which he had arrived.

The annual output of cigarettes for 1897, he said, was four thousand millions, and if it is the malign and wicked thing which its opponents claim it to be, its manufacture and sale should be suppressed as dangerous to the public health. Apparently all the agitation against the fragrant cigarette was born in prejudice like that other similar fiction, "chloroforming" or "poisoning from canned meat."

Prof. H. W. Wiley, chief chemist of the United States Department of Agriculture at Washington, analyzing that brand of American cigarettes which is used by more than one-half the cigarette smokers of the country, finds that a cigarette is made of 1.0926 grains of tobacco enveloped in a wrapper of paper weighing 0.038 grain. In other words, one pound of tobacco will furnish fillers for 416 cigarettes, and one pound of cigarette paper will serve to envelop 12,000 of these fillers. One twenty-sixth of an ounce of tobacco in a paper one by three inches in size and weighing seven one-hundredths of an ounce is a cigarette. Just tobacco and paper!

What kind of tobacco? Prof. Willis G. Tucker, of the Albany Medical College, and analyst of the State Board of Health, says in his ninth annual report: "Cigarettes are generally made from tobacco of good quality. Sensational statements that they are prepared from the filthiest tobacco and dirtiest refuse are not worthy of credence and can be easily refuted."

Prof. Wiley says that in many samples purchased in the open market he failed to find any trace of arsenic or opium, or any of its active principles. Prof. Tucker prepared for his work of analysis by searching the medical text-books and journals, and couldn't find even a statement that these foreign substances were employed. Dr. F. G. Payne, State Chemist of Georgia: Profs. Robert and

Albert M. Peter, of Lexington, Ky.: Prof. James Dewar, of Cambridge: William Odling, of the University of Oxford, and C. Meymott Tity, of "Forensic Medicine," London Hospital, join with those named in pronouncing the American cigarette free from opium or arsenic.

Then comes the third bugaboo—that of inhalation of the smoke—which called forth an answer from Sir Henry Thompson, who said that the cigarette was the least injurious form of smoking, and Meyer Dutch wrote that "the inhaled smoke rarely passes beyond the bronchi, very little ever entering the air vesicles."

Thus science lays another robust falsehood in the dust. The cigarette smoker may henceforth enjoy his rings of smoke in peace of mind.—CYRUS ALDRICH, in *Scientific American*.

THOSE who desire to see the argument for teaching physiology and in the teaching of physiology using dissection and even vivisection, in the public schools, will find it effectively presented by Professor B. G. Wilder in a pamphlet reprinted from "Science" for December, 1897. He claims that the knowledge of man's own physical nature is essential to a liberal education: that the foundations for future specialization must be laid in youth, otherwise the time that "specialists might devote to research and advanced instruction is consumed in acquiring and imparting the neurologic alphabet:" that the mere memorizing which is required becomes more irksome and difficult with advancing years: that "children are spontaneously interested in natural objects," and that their supposed objection to "specimens" is either imaginary or due to false education: that "if it be legitimate to slaughter animals for food, it is even more so to kill them humanely, as with chloroform, in order to gain information:" and that some experiments in education have practically proved certain of these theses, such as the readiness of children to acquire the language of physiology and the absence of objection in their minds to dealing with specimens. The paper is interesting, but to us is not convincing. That some general knowledge of hygiene is a necessary factor in all education is, we think, true: children should be taught to know how to use their bodies. But it does not follow that they should be taught anatomy or physiology. The danger to our public school system from overloading it with too many studies is very serious: the danger to the individual pupil of making him an egoist, turning his thoughts upon himself and his own vital processes, from the too early study of physiology, philosophy, or ethics, is very considerable. We cannot provide a foundation for all forms of specialism without the first peril, nor can we teach either physiology, psychology, or ethics scientifically, except to advanced pupils, without the second. Our public school system, at least in the great towns and cities, needs greater simplification rather than greater complexity.—*The Outlook*.

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PULMONARY AND OTHER INTERNAL HÆMORRHAGE.

BY ALEXANDER M'PHEDRAN, M.B.,

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It is rather to draw attention to the fallacies of much that is popular in the treatment of this usually alarming condition, than of offering anything new, that this short article is written. As is the case with all conditions not easily controlled by treatment, there have been a great number of remedies recommended for the arrest of internal hæmorrhage, and, as is usually the case under such circumstances, few, if any of them, have any influence in attaining the end in view. In a recent work, for example, among the many remedies, lead acetate, tannin, gallic acid, alum, hamamelis, iron, sulphuric acid, vinegar, etc., are recommended in pulmonary hæmorrhage as being efficient remedies. No reason is assigned for the efficacy of these drugs; they are never suggested for the arrest of external hæmorrhage, in which they should be as effective as in pulmonary or other internal hæmorrhage. That arrest of hæmorrhage has followed the administration of each and all the remedies recommended may be quite true, but it does not follow that such arrest was due to the remedy used. The natural history of the hæmorrhage appears to be usually overlooked: hence its arrest following the use of the means adopted is attributed to these means. With few exceptions, if the patient is left alone the bleeding ceases in a short time, varying in different cases. In most cases the hæmorrhage occurs without provocation, often at night during sleep. There has been an erosion of a vessel, or, what perhaps is more usual, an aneurysmal dilatation of a vessel became so

weakened that it ruptures under the stress of ordinary blood-pressure, which, in the pulmonary vessels, is probably increased during sleep on account of the shallower and slower respiration, and consequent lessened aeration of the blood. Soon after the bleeding occurs, the extravasated blood begins to coagulate at its periphery, and, as the coagulation advances, it offers increasing resistance to the escape of the blood, until the resistance equals the pressure of the escaping blood, when the flow ceases, and the arrested blood soon clots, permanently stopping the hæmorrhage.

Too often the sudden arrest of the hæmorrhage by the natural process is attributed to the remedies that have been given. Some years ago this was well illustrated in the case of an intelligent druggist. He had been subject, at long intervals, to attacks of profuse hæmoptysis. He had for some years on each occasion taken ergot freely to arrest the attacks. He was assured that they would stop as soon without as with the ergot, and, as the ergot disturbed his digestion very much, he agreed, although with much trepidation, to omit it altogether. He was much gratified to find that the hæmorrhage ceased quite as promptly as it had ever done when ergot was taken.

One advantage from the use of these drugs is due to the fact that something is being done: by this means the patient's confidence, and therefore his comfort, is increased. This end can, however, be attained by reassuring him, and by giving some simple sedative that will not disturb the stomach. Should these means prove insufficient to induce both mental and physical quiet, morphine should be given hypodermically in such quantity as will be needed to attain that object.

Of all the remedies for hemoptysis, as well as for other internal hæmorrhage, ergot is doubtless much the most widely used By many, if not by most physicians, it appears to be given without any well-defined conception of its mode of action. There is an indefinite idea that it acts in these hæmorrhages much in the same way as it does in arresting uterine hæmorrhage after parturition.

Pharmacologists are well agreed as to the chief physiologic effects of ergot: (1) That it stimulates the vasomotor centre in the medulla and the various subsidiary centres, thus increasing the general blood-pressure: (2) That it acts on the unstriped muscular fibres of the walls of the blood-vessels, causing contraction of their calibre, chiefly of the arterioles, as their walls contain the most muscular tissue: (3) That it has no influence on the coagulation of the blood; (4) That it depresses the motor ganglia of the heart, causing a slower and less powerful contraction.

From these effects it is quite evident that ergot will tend to increase the amount of blood escaping from a rent in an artery, in so far as it raises the blood-pressure at the bleeding point, as well as throughout the arterial system. Its depressing effect on the heart is apparently more than counterbalanced by its action on the peripheral vessels.

In the lungs, as in the brain, there is no necessity for alterations in the blood-supply. Hence in the brain there are no vasomotor nerves, while in the lungs, though the vessels are supplied with vasomotor nerves, their influence on the vessels is at a minimum.

It follows, therefore, that ergot can have no influence, through the vasomotor nerves, on the vessels of the brain, and practically none on those of the lungs. Any influence it may have on these vessels must be through its direct action on the muscular coat of the arteries. This effect is probably very slight, but, such as it is, it tends to raise the blood-pressure in them, and to this extent increases the force with which the blood escapes from a ruptured vessel. The degree to which it can increase the general arterial tension can have no effect on that part of the pulmonary vessels, as at the same time it depresses the heart, bringing about a less powerful action.

In view of these facts, it is clearly injudicious to give ergot in cerebral and pulmonary hæmorrhage. In capillary and venous pulmonary hæmorrhage it may do good to the extent to which it raises pulmonary blood-pressure by increasing the force and therefore the rapidity of the blood-stream, thus relieving local congestion by establishing better circulation, not by lessening the amount of blood entering the congested area through the contracted arteries, as held by some writers. But for such a purpose we have better remedies that stimulate both the heart and the arteries, such as digitalis, strophanthus, strychnin, alcohol, etc.

In view of its physiologic effect, ergot must be injurious in intestinal hæmorrhage. By its action on unstriped muscular fibre it causes increased intestinal peristalsis. The effect of this must be to disturb the bleeding point, and dislodge any clot that may be forming, thus interfering with the natural process of sealing the rent in the vessel. Yet no remedy is perhaps more generally used to control the hæmorrhage of typhoid ulceration than ergot.

So far as the use of purely astringent remedies is concerned, there does not seem to be a good ground for the belief that they have any influence on internal hæmorrhage. They are all changed in the intestinal tract into inert substances that can have no effect on the blood or the blood-vessels. Even in intestinal hæmorrhage their power is questionable. In hæmorrhage from capillary congestion or from small veins they may doubtless have some restraining influence, as they have on the secretions of the intestines, causing constipation, but that they have power to control arterial bleeding seems more than doubtful. We know how disappointing their use is in epistaxis, in which the surface is fairly within reach of direct application: in the intestinal canal their power must be infinitely more uncertain, and in pulmonary and other internal hæmorrhage they can have no effect.

The influence of a remedy in controlling internal hæmorrhage must depend: (1) On its power to lower blood-pressure, which is equivalent to increasing the resistance to the escape of blood: (2)

On its power of increasing the coagulability of the blood: or, (3) On both of these combined. By the use of remedies of the first class we seek to equalize the pressure of the escaping blood and the resistance to its escape, and thus bring the blood to a state of rest that it may coagulate and permanently seal the opening in the vessel. By the use of the second class of remedies we aim, of course, at hastening the coagulation of the extravasated blood.

For the accomplishment of the first object we have, as types of such remedies, opium, which quiets the heart and circulation, and the nitrites, which lower the blood-pressure by relaxing the peripheral vessels. These are probably our most potent remedies for the control of internal hæmorrhage.

Of remedies that increase the coagulability of the blood, calcium chloride and potassium iodid are perhaps the best examples. It is worthy of note that the agents of the first class act promptly, and to this their efficiency is not a little due. On the other hand, the second class require some time to produce their effect on the blood, so long in fact that the majority of internal hæmorrhages will have ceased from natural causes before their influence can be perceptible; they will have much more effect, therefore, on the slow bleeding from veins and capillaries than on rapid arterial flow.

Medicines that lower vascular tension are especially indicated in the class of arthritic hæmoptysis first described by the late Sir Andrew Clark. They are met with among the gouty or lithemic. The vessels are sclerosed and the pulse tension is very high. The hæmorrhage may be slight, as shown by a small amount of sputum of a pink or deeper red color; or it may be very profuse. The following case serves as a good illustration:

A. B., aged 63, an active business man, had lived plainly as to food, but had long secretly taken laudanum and spirit freely. Early in the morning he had a copious hæmoptysis, losing over 20 ounces of blood; shortly afterward the pulse was very tense and slightly excited. His general condition was favorable, the breathing normal. The bleeding recurred twice during the day. He was kept in bed and his pulse-tension made low and so maintained by the administration of nitroglycerin. The bowels were freely moved by salines. His habits were corrected as far as possible and he had no recurrences of the pulmonary hæmorrhages, but he showed the signs of atheromatous changes in the cerebral vessels in the mental deterioration that followed. The pulmonary hæmorrhage was probably the safety-valve action that saved him from a cerebral hæmorrhage; it would have been better for him had the hæmorrhage occurred much earlier, so that he might have been warned to make those changes in his habits necessary to delay the rapid arterial degeneration.

Such hæmorrhages are identical with those occurring in mitral stenosis. The bleeding may be only sufficient to give a pinkish hue to the sputum or so free as to prove suddenly fatal. In the latter there is always marked hypertrophy of the right ventricle.*

To treat these cases of high vascular tension of the pulmonary circulation, whether associated or not with high tension of the general circulation, with ergot or other agent tending to contract the arterioles, is most unwise.

* See *Transactions of Association of American Physicians* for 1895.

HIP DISEASE.—A CLINICAL LECTURE.

BY B. E. M'KENZIE, B.A., M.D.

As, fortunately, I shall be able to show you several cases which will greatly aid us in distinguishing between various affections which may be mistaken for hip disease, I shall at this time lay but little emphasis upon etiology or pathology. There are a few points however, that may wisely be considered that have reference to the anatomy of the hip joint. It will be remembered that there are three osseous centres at the upper end of the femur, one for the great trochanter, one for the lesser and one forming the cap that completes the head which rests in the acetabulum This latter is entirely enclosed within a capsule which, attached at its outer rim to the border of the acetabulum, joins the intertrochanteric line in front and the neck of the femur behind. The significance of the fact just named will be appreciated when we remember that in children the disease generally has its beginning in or adjoining the epiphyseal cartilage. At this point there is increased physiological activity during the period of growth so that the conditions are favorable for the development of the bacillus of tuberculosis once it has chosen this nidus for its development. The extension of the disease from its starting point brings it toward the surface and it generally opens within the capsule. Should the focus of disease be located, however, farther down in the femur, when it reaches the surface of the bone its opening may occur outside of the capsule and there may be no intra-articular involvement. At other joints in the body, for example the knee, there is no epiphysis entirely enclosed within the capsule as is the upper epiphysis of the femur just referred to. As a consequence, here disease beginning in the bone reaches the surface frequently outside of the joint. This I believe explains the greater number of hip cases that we see.

Other joints are more exposed than this one, *e.g.*, either the knee or elbow. Both the ankle and knee are quite as liable to traumatic influences and even more so than the hip. The elbow, however, although more exposed, is not subject to the concussions and bruises which result so frequently from a mis-step. These facts throw much light upon the etiology of this affection. The Germans teach that the disease arises much more frequently in children in the epiphyseal cartilage. The English, however, seem disposed to lay more stress upon the disease beginning in the synovial membrane.

The boy whom we have before us to-day affords an excellent opportunity for us to observe the early symptoms of hip disease. His case illustrates the history of the disease as we most commonly observe it. Inquiry into the family history is always of great importance. When there is a marked history of tuberculosis in

the patient's progenitors it has an important influence, I believe, in determining our prognosis. In the case of the little fellow whom we have here to-day, however, there is little or no account of family taint from this affection. Several months ago the following facts were noticed, not all at once but gradually in this boy's case.

Lameness. This is the symptom which is most commonly first observed. The lameness in the beginning is often very indefinite. It will more frequently be noticed after a long walk or in the morning when the patient first rises, the joint being somewhat stiff. After moving about for a little time it is less felt and less observed, but again after considerable exercise the patient complains of feeling tired and will be noticed to limp. If the patient have a somewhat prolonged rest the lameness seems to disappear almost entirely and often an error is made by the physician at this time. Slight complaint having been made by the child, and the doctor having been consulted, puts the child in bed and perhaps applies a blister or employs a liniment for a few days or weeks, and as no complaint is made the child is allowed to get up and seems to have made a good recovery. Very careful inquiry will nearly always elicit the fact that the child had never recovered *entirely* from the lameness and that a slight affection of the gait was noticeable.

Later in the course of the disease the lameness is not so indefinite and is much better marked than that which I have described and more marked than is observed in the little fellow before us. Under such circumstances, of course, there are likely to be many other symptoms present which also enable one easily to make a diagnosis. As you watch carefully this little fellow walking across the operating room you will see that he seems to favor slightly the right limb.

Deformity. Observe carefully the little fellow as he stands upon the floor. You will notice that his weight is allowed to rest more upon the left leg than upon the right, also that the right femur is very slightly flexed upon the pelvis; and by carefully noting the iliac crests you will see also that his pelvis is lower on the right side and that the femur is slightly abducted. I may call your attention also, as his back is turned toward you, to some other points which are typical. The buttock on the right side appears flatter, less rounded and wider than that on the left. This symptom is less marked than we often see it and less marked than we find it in cases a little advanced but is distinctly noticeable. It is a very valuable symptom, very constantly present. Always put your patient in a good light and standing at a little distance compare carefully the two sides when the facts above referred to will be observed. The crease at the lower border of the gluteus on the right side is less marked than that on the left. Observing the boy as he stands or walks before us I do not know that there are any other points noticeable in this case which will throw light upon his trouble.

Now, placing him on his back on the examining table where the surface is firm and does not yield to the inequalities of the body, we are able to notice a few important facts which will greatly aid us The flexion of the femur is now more clearly shown while the spine is brought fairly well into contact with the table. The left leg easily comes into line with the body and lies upon the surface of the table, while the right is noticed to be flexed, making an angle of about thirty degrees with the table.

Limitation of Motion. The term which I have used to designate the condition which I am now about to demonstrate is, I believe, the best to choose. Fixation is not applicable because in early stages there is no fixation of the joint. Stiffness is not applicable because in the ordinary sense of stiffness there may be none. The motion, though limited in extent, is apt to be free up to a certain point. Please follow me carefully as I take hold of the limbs and move them in a carefully prearranged manner. First, it is well always to take the limb on the sound side in order that you may gain the confidence of the patient by moving that part which will give rise to no discomfort. Seizing, then, the femur just above its condyles and placing the other hand upon the body so as to assist in keeping the spine in contact with the table the limb is first flexed and the extent of its motion carefully observed. The motion at the hip permits the femur to be flexed until it comes into contact with the abdomen and extended until it lies upon the surface of the table. When the femur is flexed to ninety degrees and abducted it falls outward to about ninety degrees and causes but very slight turning of the pelvis even when it is brought into contact with the table. Then when the limb is extended fully rotation should be made. The amount is shown to be nearly 180 degrees as observed by the fact that both the inner border and the outer can readily be brought into contact with the table.

Now, having gained the confidence of the patient by handling the sound limb we take hold of the right femur in the same manner and execute the same movements as before. It is noticeable that considerably less flexion is permitted: and we have already pointed out the fact that the extension is not so complete. At this point I am in the habit of recording in my notes by a very concise plan the facts observed. When the femur is flexed to the greatest degree that can be done without causing movement of the pelvis the angle formed by the femur and the axis of the body is about eighty degrees, whereas the left femur forms an angle of about forty-five or fifty degrees with the body. We also noted previously that when the left leg is fully extended the angle which the femur makes with the line of the body is about 150 degrees. This fact I record as follows: A. G. F (angle of greatest flexion) 80 degrees, and A. G. E. (angle of greatest extension) 150 degrees. Making abduction with the right as we did with the left femur when flexed to ninety degrees we find that before the leg is brought nearly into contact with the table the pelvis follows the femur, that

is, it turns over toward the right side, showing that there is not nearly as much abduction permitted by the right femur as by the left This may also be noted by saying that abduction is about half of normal in this case. In rotation there is but very little limitation observed. Sometimes, however, it is well marked. Another method of determining the abduction I find of even greater importance than that just named. As the patient lies upon his back, with the legs separated as much as they may be without discomfort, standing at the end of the table the limbs are grasped by the hands and abduction of both is made at the same time. Observe carefully the pelvis. It will be seen that while the left allows of very free abduction and that while for the first sixty degrees of separation between the limbs they move symmetrically, yet at that point the pelvis follows the motion of the right femur, showing that there is still movement freely permitted at the left joint and not at the right. In cases where the symptoms are not distinct I have frequently found this one clearly though but slightly observable and therefore a symptom of great importance in determining the limitation of motion in very early cases.

Now turning the patient upon his face and making hyperextension it is noticed that while extension beyond 180 degrees is easily permitted with the left thigh we cannot make extension even to 180 degrees as was before observed, with the right.

These symptoms are somewhat more marked in this patient than in some whom we have had occasion to examine. You must not expect that in all cases where the disease is present you will find the symptoms quite so clearly attendant as they are in this boy. Sometimes some of these just noticed may be entirely absent and others present in a degree which is observed only through the exercise of the greatest caution. I think you will agree that the symptom which we have just demonstrated in the flexion, abduction, rotation and hip extension is well described by the term, Limitation of Motion.

Were I confined to any three symptoms upon which to make a diagnosis I would depend upon those just given as being by all means of the greatest importance. There are others, however, which may greatly aid us and throw further light upon this subject.

Pain. Careful inquiry of the parents of this child reveals to us the fact that pain has not been a prominent symptom. They say that he has complained little or none, that when quite tired he has said in a general way that his leg hurt him. Pain, however, is more commonly experienced than would be noted in this boy's history. It is a very misleading symptom in many diseases and yet in hip disease it tells a fairly consistent story. If you recall the fact that the hip joint is supplied by nerves from three sources, the anterior crural, obturator, and the secral nerves and that also nerves from the two former reach the vicinity of the knee joint and there find a limit, you will have an anatomical explanation of the fact that pain is more commonly found about the knee than else-

where in disease of the hip. The explanation of this fact is found in this, that the knee being so much exposed frequently conveys messages to the sensorium which arise from stimulation of the peripheral nerves above referred to, whereas the twigs which reach the hip joint do not thus convey messages to our consciousness so commonly. As from both of these sources the nerves pass to the central nervous system, pain which really arises in the hip joint is interpreted in our consciousness as having come from nerves in the neighborhood of the knee joint. Certain it is that the pain which is most characteristic of hip disease is pain at the knee. Not unfrequently has the knee been treated for months because of the constant complaint of pain there while the hip joint was the real offender. If you bear in mind your anatomy this misleading symptom of pain may give you much information instead of leading you astray.

Atrophy. As a very early sign of the disease it will be noticed that the muscles which control the joint have less tone and volume than their fellows. This probably does not depend entirely upon the non-use of these muscles but, apparently, at least, upon trophic influence. Before this sign can be observed by the use of the tapeline it can be observed by the fingers as the muscles are handled. It will be found that there is less firmness in those of the affected limb. The same fact we observed a few moments ago when looking at the gluteal region, which was seen to be broader and flatter upon the right side than upon the left. Examination, however, with the tapeline reveals the fact that both the calf and thigh of the right side have less volume than those of the left. These facts may be recorded in the following manner: Measuring from the anterior superior spine of both sides we mark the following points with a colored pencil on the thighs—six inches, nine inches. This is done in order that we may not measure the limb higher upon one side than we do on the other. The record then is as follows:

R. T. (Right thigh) $9\frac{1}{2}$ in., $11\frac{1}{4}$ in.
L. T. (Left thigh) 10 in., 12 in.
R. C. (Right calf) 8 in.
L. C. (Left calf) $8\frac{1}{2}$ in.

Local Changes. Under this head I propose to examine the upper part of the femur and as much of the joint as I may be able to do with the fingers. I have preferred this term to the term "swelling," because in the earlier cases it can scarcely be said that there is swelling present. Then when the tips of the fingers are carefully pressed close to the bone at the back of the trochanter, and also directly in front of the head of the femur, some thickening on the affected side may be detected when careful comparison is made with the sound side As the fingers, especially at these points, are pressed home, it will be noticed that there is a feeling of infiltration in front of the bone on the right side which is not

present on the left. Now, careful observation at this point will also show that the crease in the groin has slightly disappeared owing to the increased fulness here, also at the back of the joint the fingers can readily detect the fact that the bony outlines are more hidden. There appears to be a thickness which is due to infiltration. This is not noticed behind the left hip. Standing the patient upon his feet again, and looking carefully, we observe a slight dimple, or depression, which is seen fairly well marked behind the left trochanter which has largely disappeared behind the right.

Heat. To another symptom I must call your attention, which, however, I do not recognize in this case. When the hands are placed upon the vicinity of the joints, it is sometimes observed that there is more heat on the affected side. This manner of determining the condition is, however, a somewhat inaccurate one, but when a distinct difference is present it is of value.

Temperature. You should always take the temperature of the patient. It is well if you are able to observe it for several days. Very commonly it is found to rise two or three degrees higher in the evening than in the morning.

Before leaving this part of our subject, I wish to make some further measurements, in order to show you how they may be recorded, and also because the results may considerably affect the prognosis. Placing the little fellow again on his back, I first measure from the right anterior superior spine of the ilium to the right internal malleolus and find the distance to be $23\frac{1}{2}$ inches, which is recorded R. A. $23\frac{1}{2}$. Measuring the left side we have L. A. $23\frac{1}{2}$. Measuring from the umbilicus we have R. U. $24\frac{3}{4}$ inches, L. U. 24 inches. Thus we observe that the length of the limb as such is not increased nor shortened, while the length as measured from the umbilicus gives an apparent increase of $\frac{3}{4}$ inch. This latter is seen also when you compare the feet as he lies upon his back, the right coming further down than the left. The distinction to be observed here is of importance. We spoke of the one as an apparent lengthening when the measurement is made from the umbilicus, whereas when the measurement is made from a fixed bony point, as near to the upper end of the femur as possible, the difference in measurement, if any, would show a real lengthening or shortening. Real lengthening seldom or never occurs in disease of this joint, while in the knee joint real lengthening is quite commonly observed from the increased growth of the epiphyseal cartilages of the femur and tibia. A mistake is frequently made in this matter and the affected limb is spoken of as if it really were longer in hip disease than the sound one. The apparent lengthening is due to abduction.

This patient does not afford us an opportunity for observing the symptoms which are present in the more advanced forms of the disease, but a little later we will look into the symptoms which arise from these conditions.

(To be continued.)

INSTRUCTIVE STATISTICS.*

BY J. J. CASSIDY, M.D.

It is interesting to make comparison between the vital statistics for 1897 of Toronto and Montreal, in Canada, and Philadelphia and Chicago, in the United States, in order to estimate the facts which underlie the natural increase of population in these cities. In Montreal, with a population of 262,100, the total births for 1897 were 8,850, or 32.43 per 1,000 of population. In Toronto, with a population of 183,172, the births were 4,076, or 22.25 per 1,000. In Philadelphia, with a population of 1,214,256, the births were 29,591, or 24.37 per 1,000. In Chicago, with a population of 1,619,226, the births were 28,158, or 17.39 per 1,000.

In reference to the high birth rate of Montreal, Dr. Roy, Recorder of Statistics, writes that "he only gives the number of those who have been registered, and that, owing to a defect in the law, registration among those who do not have their children baptized is not regularly done." In reference to the birth rate of Chicago, Dr. Reynolds, Commissioner of Health, of that city, writes that he does not get all the births that occur, probably not over 90 per cent., possibly not over 80 per cent. Occupying middle ground, Philadelphia maintains a fairly high birth rate, 24.37 per 1,000. The surprising part of the record is the relative showing of Toronto, with a birth rate of 22 25 per 1,000, higher than that of Chicago, but lower than that of Philadelphia.

The marriage rate of Montreal, 6.9 per 1,000, not only does not explain the high birth rate of that city, but makes it the more surprising. It seemed possible that a considerable percentage of illegitimate births might account for the high birth rate and low marriage rate. This, however, is not the reason. Through Dr. Roy, Recorder of Statistics, we learn that the illegitimate births in Montreal were 644, which sum being deducted from the grand total of births, 8,850, leaves 8,206, or a legitimate birth rate of 31.3 per 1,000.

In Toronto, the marriage rate, 8.19 per 1,000, is higher than in the other Canadian city. In Chicago, the marriage rate is 8.43 per 1,000.

In Philadelphia, the marriage rate, 12.67 per 1,000, is the highest in these four cities, being nearly double that of Montreal.

In Chicago and Philadelphia, premature and still births are excluded from the death rates. In order to compare, on even terms, with these cities, we shall eliminate the premature and still births from the death returns of Montreal and Toronto. The

* Read at the Second Quarterly Meeting of the Ontario Provincial Board of Health.

deaths in these cities are as follows: Montreal, 6,939, a ratio of 26.47 per 1,000: Philadelphia, 22,375, a ratio of 18.72 per 1,000: Toronto, 2,873, a ratio of 15.68 per 1,000; Chicago, 21,809, a ratio of 13.46 per 1,000.

The increase of births over deaths depends on two chief factors: either an increase of the birth rate or a decrease of the death rate. The following table makes a comparison between births and deaths in these cities during 1897, with the natural increase:

City.	Population.	Increase of Births Over Deaths.	Percentage of Increase.
Montreal	262,100	1,911	.0072
Toronto	183,172	1,203	.0065
Philadelphia	1,214,256	7,216	.0059
Chicago	1,619,226	6,349	.0039

The best of these percentages, that of Montreal, is a trifle under three-quarters of 1 per cent. Now, according to the estimated rate given in the annual report of the Registrar-General for England and Wales, the natural increase for that country for 1890 is 1½ per cent, and the report for 1891 states, that the same rate was maintained for that year. The natural increase in these cities is, therefore, small. Yet the effect of an immense birth rate is apparent, when we see that Montreal, in spite of a large mortality, is able to show a greater increase than Toronto. Similarly Philadelphia, in spite of a relatively large death rate, shows a larger increase than Chicago.

During the year 1897, notable epidemics of preventable disease did not prevail in these cities. Philadelphia had a mortality of 401 from typhoid fever: in Chicago, typhoid fever caused a mortality of 437, against 751 in 1896, an immense decrease. In contagious diseases, scarlatina caused a mortality of 66 in Toronto, and small-pox a mortality of 12 in Montreal. Moreover, the annual death rate of Philadelphia, 18.72 was, for a large city, quite normal: that of Toronto, 15.68, was also satisfactory.

Under these circumstances, the low death rate of Chicago and the high death rate of Montreal demand some explanation. An authority (Rohé) states, that in a large city, such as Chicago, a death rate of 13.46 "would indicate that all the deaths had not been recorded, or that the population had been over-estimated: rates above would be evidence, that there were special causes at work demanding sanitary investigation and improvement." Without undertaking to dispute these assertions, it may be well to

point out, that the Chicago Department of Health, which, in 1897, was carried on at an expense of $213,560, maintains a special bureau of vital statistics, and certainly ought to be informed of every death, which occurs in that city. The statistical population figure used is the official school census, declared July 1st, 1896. In Chicago, moreover, the proportion of adults to children is, probably, greater than the normal, and the death rate is naturally lower. Besides, great efforts are being made in that city to put down disease and promote good health, so that, owing to the social condition of many of the people, and civic sanitary improvements as well, a low mortality is quite conceivable.

A survey of the diseases, which produce the large mortality of Montreal, does not reveal many causes demanding special sanitary investigation. In 1897 there was an outbreak of small-pox, which caused twelve deaths, and the death rate from other zymotic diseases, is not high. The following table shows the typhoid fever mortality of the four cities, with the ratio per 100,000 of population:

		Deaths from typhoid fever.	Ratio per 100,000.
1897.	Toronto	30	16.37
	Chicago	437	26.98
	Montreal	80	30.52
	Philadelphia	401	33.02

Here, we may admit, that the Montreal ratio assimilates too closely to that of Philadelphia to be reassuring. It may be, therefore, that the Montreal water works demand sanitary investigation and improvement, or the large typhoid mortality may be explained in a different way. In order to show the mortality from zymotic diseases, whose incidence falls most on children, in a city with a high mortality, compared with a city having a low mortality, the following table is submitted:

1897.	Montreal—Deaths from	variola	12
	" "	mumps	00
	" "	measles	63
	" "	scarlatina	17
	" "	whooping cough	95
	" "	diphtheria and croup	251
			438

Or 6.3 per cent. of the total mortality.

1897.	Chicago—Deaths from	variola	00
	" "	mumps	4
	" "	measles	139
	" "	scarlatina	81
	" "	whooping-cough	160
	" "	diphtheria and croup	772
			1,156

Or 5.3 per cent. of the total mortality.

Here, an advantage of 1 per cent. on the side of Chicago, shows that measures for the suppression of contagious diseases were more successfully carried out in Chicago, than in Montreal. It is only fair to say, however, that in Montreal, on account of a high birth rate, there are more candidates for contagious diseases, and, consequently, greater difficulty is experienced in checking outbreaks of these diseases than in Chicago. Some other factor than insanitary conditions seems, therefore, necessary to explain the high death rate of Montreal. It seems to be due to a large mortality among infants and young children, particularly the former. For instance, the deaths of children under five years of age in Philadelphia were 7,605, or 33 per cent. of the total mortality. In Toronto, the deaths of children under five years of age were 998, or 34.73 per cent. of the total mortality. In Chicago, the deaths of children under five years of age were 8,546, or 39 per cent. of the total mortality. In Montreal, the deaths of children under five years of age were 3,273, or 47.16 per cent. of the annual mortality. In Montreal the loss of infantile life appears to be excessive. The actual figures are :

1897. Montreal—Total mortality			6,939
	Deaths under one year	2,306—33.23	
	Deaths from one to five years	967—13.93	
			3,273—47.16
1897. Chicago —Total mortality			21,809
	Deaths under one year	5,735—26.29	
	Deaths from one to five years	2,811—12.88	
			8,546—39

The mortality rate for children from one to five years of age is better, by over 1 per cent, in Chicago than in Montreal: but the great divergence appears, when we compare the respective mortality rates of children, under one year of age. Under this head, Montreal has a mortality of 6.94 per cent. larger than that of Chicago. This does not mean that infantile life is more carefully preserved in Chicago, than in Montreal. The death rate among infants bears a relation to the birth rate: in cities where the birth rate is high, the infantile death rate is high, and where it is low, the infantile death rate is low.

Among the causes, that make the mortality among infants and children high are: Parents too young or sickly, hereditary taints, unhealthy environments, improper and insufficient food and clothing. It is, simply, the manifestation of the workings of the law of the "survival of the fittest." As evidence of the soundness of this view, we may say, that in Montreal 658 deaths were due to congenital debility, 129 to infantile convulsions: 310, a large number of which were in children, to simple meningitis, and 1,396, the greatest number of which were probably in infants and children, to diarrhœa and gastro-enteritis, which was the highest single

factor in the death rate of Montreal. If to these we add the number of infants and young children, who perished from zymotic diseases, we can see how the large mortality is produced. When contagious disease appears in Montreal, it is all the more necessary for the health authorities to exert themselves and enforce good hygiene in the domicile and the school, so that, though the congenitally weak may perish, the largest number of those, who are fit and strong, may be spared to reach adult age.

THE OBSTETRIC BINDER.*

BY W. J. WILSON, M.D.

THERE is a great difference of opinion among medical men as to the value of the binder in obstetric practice. Some think it almost an essential, and pay a great deal of attention to its shape and fit and method of application, while others from observations on primitive races argue that it is entirely unnecessary, useless, or even injurious, and for these reasons have discarded it. It was a common practice among the older practitioners to place a pad over the uterus and pin the binder tightly over this. Sometimes a book or other hard substance was used for a pad. The effect of this was to make the woman very uncomfortable, and cause the binder to slip and the pad to become displaced The object of this pad was to force the uterus down into the pelvis and take the place of the grasping hand of the obstetrician, and by its irritation and pressure keep up continuous contraction. Some, on the other hand, claimed that this pressure caused uterine displacements and consequently was injurious.

There is no doubt that the irritation of the hard pad might have some effect in keeping up contraction if it remained constantly on the fundus, but the uterus will relax and slip to one side of or above the pad, and thus render the pad useless.

Again, it is the duty of the obstetrician to secure firm contraction of the uterus before the binder is applied, and if he is not able to accomplish this by other means it is not safe to trust to the binder.

To compare the civilized woman with her savage sister is not fair. The savage woman has never worn tight clothes or corsets. She has had her abdominal muscles developed by her mode of life, while the reverse obtains with the civilized woman. After delivery the civilized woman finds her muscular powers exhausted: she is tired out, frequently for days, and something to supplement the action of the abdominal muscles and support the abdomen proves

* Read at the Toronto Medical Society.

very grateful to her, and causes her very frequently to express her feeling of relief. The savage woman has generally an easier labor, of shorter duration, and instead of not being able to assume the erect position with safety she will get up and continue in her march with her tribe or follow her usual occupation.

A binder, to fit nicely, should be thin, preferably one-ply factory. This will stretch so as to adapt itself to the contour of the body. It should be drawn down below the great trochanters, and the lower pins drawn tightly so as to prevent slipping upwards. The writer prefers straight pins, placed closely together so there will be no bulging between the pins. It should be just tight enough to give the needed support, and be comfortable at all points. It should not be tight above so as to compress the lower ribs It should be changed as often as soiled. A well applied binder gives a needed support to the abdominal organs and adds much to the comfort of the patient. This comfort in itself should be sufficient reason for our using a binder, but there are other reasons. The emptying of the uterus lessens the interabdominal pressure and allows of a filling of the large venous trunks in the abdomen and pelvis and consequent lowering of arterial tension. The binder drives this venous blood out, lessens venous stasis, and thereby increases arterial tension. In this way also the brain becomes better supplied with blood and a general feeling of well-being is induced. On the other hand, where there is eclampsia, where it is often necessary to lower arterial tension, better leave the binder off and take advantage of the abdominal relaxation with its engorged veins and lowered vascular tension.

The abdominal relaxation following labor lessens the support to the abdominal organs and favors the occurrence of entroptosis. Of course the rest in bed and careful getting up after labor give the woman a chance to recuperate and avoid this condition, and a properly adjusted binder, by bringing the intra-abdominal tension up to or near the normal, not only gives the woman a feeling of support and security, but is a valuable aid towards her complete recovery. It requires about six or eight weeks for the uterus to regain its non-pregnant dimensions. During this time it is heavy, its support from below often weakened, the uterine ligaments are at the same time recovering from their elongation, and this, with the upright position, favors descent of the uterus. If the binder can be used so as to support the intestines from below, and thus remove some weight from the uterus, the woman is given a material aid towards her final recovery.

Drs. John Amyot and Wm. Goldie, of Toronto, left for Europe May 13. They expect to go first to London, and after remaining there for a time will cross to the Continent and spend some months in Paris and Vienna.

THE BEARING OF PATHOLOGICAL PROCESSES ON THE THERAPY OF MORBID PROCESSES ALONG THE GENITO-URINARY TRACT IN THE MALE.

BY THOMAS H. MANLEY, M.D.,
Professor of Surgery in the New York School of Clinical Medicine.

In no large class of maladies common to the human subject has the rate of progress been greater in the diagnosis and treatment of them during the past twenty-five years than those involving the genito-urinary organs. Marvellous evolution in this direction has been chiefly through the inventive genius, mechanical aids, and through our ever-widening knowledge of the morphological products and pathological processes. In some respects, however, our pace has been too rapid and our conclusions are based on fallacious premises.

The tendency to mutilation and severe mechanical interference, has, no doubt, very often been too great. In the management of calculus of the renal pelvis, the ureter, the bladder or urethra, the employment of the crusher or blade is yet imperative, but in tuberculosis, prostatic disease or cystic inflammation, the tendency now is in the direction of reaction and less severe surgical measures. This is the attitude of the French school, as expressed by Guyon.

Tuberculosis of the urinary tract, or the kidney, was a condition but imperfectly understood until of late years. But now we know that, exclusive of blennorrhagic infection, there is probably no pyogenic microbe so prolific as a factor in renal suppuration as the bacillus of tuberculosis. When a knowledge of this fact came into our possession, it was assumed that in its treatment the same principles must apply as with the management of a tubercular lesion elsewhere, viz., by an early ablation of the focus, or the entire kidney when this organ was involved. But events have transpired which have turned us around, so to speak. The mortality has been very large after operations, and further, we had no assurance that the other kidney was not involved. One might say, however, that any one was a bungler and behind the times who did not determine beyond peradventure by ureteral catheterization, whether one or both kidneys were involved, by pyogenic processes.

It may be well to remember, in this connection, in spite of Albenan's, Kelly's or Neisser's cytoscopic devices, ureteral catheterization in the male is impracticable in any other than exceptional cases, hence a procedure impossible of performance. This was so declared, at a late meeting of the Genito-Urinary Section of the Academy of Medicine in New York. We have further learned the

salutary lesson that certain types of renal tuberculosis are frequently amenable and curable by simple and safe expedients.

This Dr. Bolton Bangs, of New York, has recently demonstrated. He shows that in twenty nephrectomies for renal tuberculosis there were twelve deaths.

My own experience has been that when renal tuberculosis developed, consecutive to pulmonary invasion, the progress of the disease towards death is rapid. On the contrary, when the disease is unilateral or ascending, appropriate treatment is rewarded by gratifying results.

In order that we succeed, let us first consider what pathological processes lie before us. In the beginning it may be well to bear in mind that when tubercular destruction seizes on any epithelial structure its behaviour is quite the same. The stages of vascular stasis and inflammation past, suppuration and ulceration set in. Now, in the lung, while the vomica is forming and the residual putrid elements of inflammation and decomposition are accumulating, the constitutional disturbances and local distress are very great: but, let them burst into a bronchus, or out through the chest walls, immediate relief follows. The sore again filling without a free escape of its contents, we have *re-infection* and great misery, not from local affection so much as from misery incurred through an ascending infection of the bronchi, the tracheal and laryngeal mucous membrane. In the lung affections an insurmountable difficulty comes through the carrying away infected products, as we *cannot drain up hill*, gravity being against us. In renal tuberculosis, on the contrary, the advantage of gravity is with us, and more, once the abscess opens into a uriniferous tubule, an incessant stream of fluid is carrying downward and out of the body its contents.

The attitude of the body, then, is a most helpful aid in renal drainage. Trouble comes here nevertheless, as with the pulmonary organs, from stasis and stenosis.

When the purulent discharge from the kidney consists of a mixed infection with a predominance of the streptococcus, the mucous membrane of the prostate, the ureter or the bladder becomes involved, but for some unknown reason the urethral mucous membrane escapes. The vesical mucous membrane becomes infiltrated and thickened, ulcerated or destroyed in severe cases. When the cystic mucous membrane is involved, inflammatory hyperplasia extends into and through the muscular walls, with the result that the bladder discharges the urine incompletely. A residual quantity remains, decomposition and ammoniacal reaction begin, the purulent drip from the ureter now undergoing a mucoid ropy transformation, a condition always resulting from the action of an alkali or pus.

When this stage is reached, the miseries and woes of the afflicted are great; the racking, harassing cough of tubercular bronchitis is trying enough, but the torturing tenesmus and strangury of cystic tuberculosis is a most agonizing state.

Happily, in the great majority of cases local and constitutional treatment will yield surprising results, and, in most cases, dispense with the need of radical surgery.

Prostatis and Prostatic Hypertrophy.

The prostate is an organ of whose existence we are quite unconscious until it makes its way into the bladder, gives off an outgrowth from its isthmus, and blocks up the urethra.

This organ is the rudiment of the uterus. What its precise functions are we do not know: though, like the appendix, is probably another useless organ. About mid-age, or what is by some termed "the change of life" in the male, it is prone to begin hypertrophic changes, alter its position, and undergo neoplastic mutations. These pathological changes in themselves are entirely innocuous, and only become a source of trouble when they invade the bladder: and this they often do to such a degree as to make advanced age miserable. Besides, they are not infrequently the cause of death, through retrograde changes, extending up the ureters into the kidneys

Our hopes of successfully dealing with the prostate by radical measures have been most disappointing. Prostatectomy perineal, or supra pubic, is full of peril, but few surviving the operation. Castration is a procedure of questionable propriety, if catheter-life is possible. Fortunately, as with renal tuberculosis, very much can be accomplished in these cases by simple measures.

In some individuals the symptoms of prostatic obstruction come on suddenly. The afflicted seeks professional aid, when he is told, perchance, that he has "prostatic hypertrophy," radical measures are imperative, and that he will always be afflicted.

This is a stupendous error. Now, if without further ado, we castrate and all the symptoms abate, we claim that almost a miracle has been performed: but let us not overlook the fact that in a large number the enlargement is not neoplastic at all, but simply a vascular turgescence, with probably an admixture of inflammatory deposits: or, in other words, that the condition is transient, and not that it is a cause of vesical implication, but that it is a sequence of morbid conditions within the bladder itself. The urinary stasis of prostatic enlargement, under many circumstances, is dependent on a more complex pathology than is generally supposed, and we have good reason to believe that the initial factors are *vesical*.

At the stage of life when this begins, inertia of both smooth and striped muscles commences. The muscles begin to relax and ataxia is present in varying degrees. All the smooth muscular organs show signs of weakening. Constipation comes on, when care in diet must be observed: laxatives or enemata must be employed.

The general atheroma or interstitial vascular changes which

impair the nutritions of the alimentary canal, also begin to tell on the walls of the bladder. The organ fails to completely contract or expel its contents, and hence residual urine remains. Pavy found that transient glycosuria is not uncommon in those past middle life. Here we have a change in the composition in the urine, with the necessary ferment to stir into activity changes of decomposition and bacterial action: microbes harmless and inert in the normal state.

Cystitis begins and infection is promptly propagated into the collar of glandular tissue, which is essentially an integral part of the bladder.

From the foregoing it is, therefore, apparent that if we would relieve the prostate we must begin with the urethra and the bladder; for in all these cases there is invariably, a coincident *deep* urethritis. This may be accomplished by three things, viz., *washing*, *draining* and *deodorizing*.

First, washing, irrigating. Easier said than done, because it requires skill, experience and discretion to safely tunnel an inflamed prostatic urethra; and alas! for the poor, it is expensive, *i.e*, it consumes time and must be repeated often for several times before permanent relief comes.

The passage opened, we irrigate, first with an abundance of medicated solutions: the carbolized, standing out in the foreground as the most valuable.

The morphological elements of the urine from day to day will tell us how the case is progressing. Finally, when the urine has cleared up and inflammation has ceased, a cure is effected: with some, permanent in character: in others, in order to be maintained, the artificial drain must be employed and catheter-life is entered on.

The Unpopularity of the British Army Medical Service.

As an instance of the dearth of officers in the British Army Medical Service at the present time, it may be mentioned that at one important military station the assistance of five civilian practitioners has been requisitioned to attend upon the sick soldiery. As a "respectable"—or, perhaps, a better adjective would be "substantial"—fraction of the total British army is permanently under medical treatment for venereal diseases, and as typhoid fever appears to dog its marches, we may take it for granted that the present shorthandedness of the medical service is of serious import to the military authorities. But this being so, why do not these same authorities make terms with their medical officers? They must give them fair treatment in the end—or, an alternative not worth considering, do without medical assistance altogether. Why not have the grace to begin promptly?—*Philadelphia Medical Journal.*

Selected Articles.

HOW THINKING IS DONE.

The Theory of the Brain's Method of Working.

At last scientists seem to be on the point of finding out what happens in the brain when a person thinks, says the *New York Sun*. It has long been known that the brain is the thinking organ, but just how the making of thought comes about has been a puzzle. The celebrated Cabanis solved the matter offhand by saying that the brain secretes thought as the liver secretes bile. This terse saying passed into common use, but soon came to be recognized as a clever speech rather than an explanation of the mystery. Now, however, the most recent researches of the microscopists are making it appear that after all the saying is not so far wrong, but that, correctly interpreted, it in some measure expresses the facts. Of course, thought, being intangible, is not properly to be compared with bile or any other physical substance, but it appears that the processes in the brain which produce thought, and without which thinking is impossible, are comparable to those changes in the liver and other organs which produce the tangible secretions.

A committee of British physicians, acting jointly, have been giving particular attention to this topic for some years, and their researches, though not yet altogether complete, already show some very interesting results, which, taken together with those of investigators on the continent, let us see a long way into the intricacies of the brain. It is shown unequivocally, for example, that a brain cell, which is the really important part of the brain, actually loses part of its substance during action. The brain cells of persons and of animals that have died during a period of great exhaustion from over-exertion are found to be greatly changed from the condition of the normal cell during times of health and vigor. The cell of the exhausted brain, instead of being plump and full of nervous matter, is found to be hollowed out or "vacuolated," a cavity within its substance having formed and being filled with water. This means that a part of the cell substance has been actually consumed during the time of brain activity, precisely as coal is consumed when one gets heat from a furnace.

It is found, further, that if an animal whose brain cells are thus exhausted is permitted to rest and to sleep its cells rapidly recuperate, new material being supplied from the blood until the vacuolation has disappeared and the cell is practically as good as

new again. This explains why sleep is necessary to our existence. During waking hours our brains are literally worn away, and sleep is the state during which the repair shops of the brain make good the damage of the waking hours. Thus the brain of a person who suffers from insomnia is in the condition of a locomotive which is run night and day without going to the repair shops: disaster must ultimately result.

It is not sleep alone, however, that rests the brain cell, though sleep is absolutely essential to recuperation of the brain as a whole. But not all parts of the brain are involved in any one kind of mental effort. The blood supply of the brain is so arranged that by expansion or contraction of different arteries parts of the brain may be flushed with blood and other parts dammed off, so to speak, somewhat as the various currents of an irrigated field are regulated by the gardener. And as rapid flow of blood is essential to great mental activity, this means that one part of the brain may be very actively at work while another part is resting and recuperating. Thus it is that a person suffering from brain fatigue may leave his desk and go out into the fields with a golf stick, or on to the highways with a bicycle, and, by diverting his mind, give the overworked cells a chance to recuperate. But it must not be overlooked that such exercise involves other brain cells, which, in turn, become exhausted, and that, in the end, for the recuperation of the brain as a whole, sleep is absolutely essential. No recreation, no medicine, no stimulant will takes its place. The man who does not give himself sufficient hours of sleep, or who is unable to sleep when he makes the effort, is literally burning away his brain substance and can no more keep on indefinitely without getting fresh supplies of fuel.

In this new view it appears that each brain cell is a sort of storage battery, which can perform a certain amount of work and then must be recharged. This likeness to a battery is further emphasized by the fact that the nature of the brain cell's work consists, like that of any other battery, of the sending out of charges of energy along connecting wires, or, at least, along fibres that may be likened to wires. Brain cells, when examined under the microscope, are found not to be simple globular bodies, like many other kinds of cells. On the contrary, they are irregular in shape, and when properly stained, little wire-like fibres can be seen jutting out from them in various directions. It is along these fibres that the messages come to the cell, and other messages are sent out, much as messages go and come from a telephone central office.

This likening of the brain to a telephone central office is a comparison that may be carried to a remarkable length. Indeed, no other comparison serves so well to give one a correct notion of the method of brain action. But until recently there was one phase of the matter that could not be explained. How is it that the various messages that are surging through the brain are

directed to proper channels, among these multitudinous wires? When you call up the central office you give a certain number, and the operator connects your particular wire with that number. When you are through talking the operator breaks the circuit, and you can no longer communicate along that line. But is there anything similar to this making and breaking of currents possible in the brain? Astonishing as it may seem, the answer is yes. There is precisely such a series of changes in the circuits of the brain cells as is effected by the operator with the telephone wires.

The matter of it is this. Recent studies of the brain cell, particularly those made by the Spanish physiologist, Ramon Cajal, have shown that many of the fibres which lead out from a cell do not go on uninterruptedly to a termination in some other distant cell, as they were formerly supposed to do, but instead terminate in "blind ends." That is to say, they point out toward other cells, but do not reach them. Such a fibre clearly cannot convey any message, because, like a telephone wire that has been cut, it does not lead anywhere. But under certain conditions of stimulation a very extraordinary thing happens. The "blind" fibre, under stimulus from its central cell, lengthens out until it touches a fibre of a neighboring cell, and presto, with such contact, a circuit is completed and a message flashes between the cells. Manifestly such coming together of the "blind" fibres is precisely comparable to the operator's connecting your telephone with another. And as in the case of the telephones, so in the case of the cells, when the communication is completed the connection is broken, the fibres retract and cease to touch one another, and no further message can be sent.

Sometimes the telephone girl does not understand your order, or reports that the number you wish is "engaged," and you cannot send your message. Similarly, in the brain, it seems sometimes as if certain circuits one wishes to use are engaged in other channels; for how often does one "puzzle his brains" to recall a fact or a name, which he feels that he knows perfectly, but which will not come at command. And then how, perhaps hours afterward, the elusive name will flash before him, as if the telephone girl of his brain cell had at last succeeded in getting the right connection. When one reflects that each of these wonderful brain cells is microscopic in size, requiring, indeed, a high power of the microscope to make it visible, and that there are billions of them in a cubic inch of brain substance, one is led to wonder that such mistakes of connection or failures to connect do not occur oftener. As it is, the telephone office of the brain is easily the most wonderful structure of which we have any knowledge. The most delicate piece of mechanism ever devised by human hands is a crude thing compared with the marvellous brain cell.

In time of war it often happens that an invading army will cut the telegraph wires and destroy instruments and batteries at the central offices, so that telegraphic and telephonic communication

becomes impossible. A precisely similar destruction of brain fibres and brain cells occurs under certain conditions of disease. The familiar disease, paresis, for example, consists essentially of just such a destruction of the brain structures as this. Day by day, in the paretic's brain, disease is making inroads upon the delicate mechanism of the cells, and, correspondingly, the ideas that could alone result from the activities of those cells are annulled forever. When such destruction has gone far, involving many sets of cells, it is as impossible that the paretic's mind should act normally as that a telephone system should operate with lines cut and batteries destroyed.—*The Dietetic and Hygienic Gazette.*

SOME OF THE DANGERS SURROUNDING THE DAIRY.*

BY E. F. BRUSH, M.D., MT. VERNON, N.Y.

If the dairy is suggested to the everyday urban citizen, his imagination immediately conjures up the fair and buxom milk-maid, the foaming pail, the breath of the sweet-smelling kine, luscious cream for his oatmeal and strawberries, golden pats of butter, and bountiful, innocent sweetness, milk and honey. It may be owing to this sentimental idea of the dairy that so many take kindly to raw milk, while having at the same time an abhorrence at even the thought of eating raw meat from the same animal; when, actually, the danger of contagion, disease, and the ingestion of impurities are far greater from the milk than the meat. Few people, I believe, realize the menace which lies in the milk-supply of cities. Milk which is dangerous and perhaps deadly poisonous, appears just as innocent, innocuous, and deliciously nourishing as the fluid that is so in truth.

In many of the dairies supplying milk for food nearly everything is either totally wrong or not quite right enough to produce a wholesome product. It is well known that the dairy cow is subject to numerous grave diseases, and many of her maladies are, we know, the same as those which afflict the human race, and it is also an established fact that any disease in the cow affects her milk perniciously. Everyone who observes current literature on the subject knows that there are several articles of absolutely refuse material which are used as food for the dairy cow, while she is expected to give in return one of the highest types of food for human use. The cow is necessarily a delicate creature. What condition may be imagined, except actual disease, that is more opposed to robustness, vigor, and hardihood to withstand the shock of cruelty, bad food and dirty surroundings than maternity and

* Read at the Ninety-second Annual Meeting of the Medical Society of the State of New York and printed in the *Medical News*.

lactation? It is only reasonable to affirm that the dairy cow must receive solicitous attention, gentle treatment, and absolute cleanliness in her surroundings and feeding if it is expected that she will supply milk fit for human food. It was long ago discovered that what affects the mother affects the nursling, sometimes even so far as to cause the death of the latter.

Unfortunately, it is the exception to find a dairy in which the cows are treated kindly and fed or housed in a cleanly manner. At the present time health authorities appear to recognize nothing but tuberculosis as the sum total of all the disease and danger contained in the improperly managed dairy. The source of possible contamination, which surround the milk after it is drawn from the cow, are many and serious on the majority of dairyfarms as they are conducted at the present time, and it is this part of the hygiene of the dairy to which I particularly wish to call attention now, because this branch of the subject receives everywhere less attention than it deserves, and I believe that when we are able to exclude the diseases which arise from milk-contamination in the dairy, outside the cow, we will be better able to trace some of the epidemics which find origin in the animal herself. Until all the dangers of the dairy are recognized many of the more grave and menacing ills cannot be remedied.

It must be remembered, in considering milk, that there is no other article of food just like it. There is no food, fluid or solid, which presents so many favorable conditions for the absorption of the tangible material of disease and for its preservation and multiplication, and in no other instance is a medium found for the conveyance of infection by which so much harm can be accomplished in such a very short time. Of course, a certain degree of heat will disinfect milk, but even a high temperature will not eliminate the toxins already contained therein.

We are constantly searching for a specific remedy for scarlet fever and other often fatal diseases of childhood, while frequently permitting the bacterial cause of these diseases to be fed to our children in their milk. Many of the diseases of infancy may be rendered much less frequent or even altogether eradicated by proper attention to the hygiene of the dairy, and I believe that the achievement of success in this line is being delayed by the futile efforts of well-meaning physicians, who imagine that they are correcting the evils of a bad milk-supply by modifying, Pasteurizing, sterilizing, adding animal and chemical compounds, and by otherwise changing the character of the milk.

Around every dairy is a multitude of dangers—dangers, unfortunately, which are not always appreciated or avoided, and hence culminate in disaster. There are many other animals about the dairy besides the cow which menace the dairy produt, often as seriously as a diseased cow herself. Horses, dogs, cats, rats, mice, and fowls undoubtedly are often the direct means of infecting milk, and of thus passing contagion along to the human race.

Cats loll and purr around many dairies all day, and it is a very common thing to see a weezy old cat lapping warm milk from a pail or other milk container. These animals are known to succumb to a throat trouble which appears identical with human diphtheria, and it is also known that they die from tuberculous forms of disease. So it is not unreasonable to ascribe contagion to these animals, when they are allowed the freedom of the dairy. Dogs prowl about the farm day and night, and very often depend upon the carcases of dead animals for their living. Cows, horses and pigs often die of septic and contagious diseases; the carcases are hauled into the woods or fields, away from the house, and there left exposed as meat for the farmer's dogs. These dogs come back and lap the milk-pail, lick the empty milk vessels which are never properly cleaned; and can there be doubt that the milk is thus infected? Where this danger exists in a dairy it is practically unlimited. Rats and mice infest the ordinary dairy; they get into the milk and the milk vessels. These animals also have their diseases, and, therefore, the element of danger and disease from these pests must be acknowledged. The poultry around the farm are sometimes very numerous, and not always healthy. The diseases to which they are subject are many, and, owing to their high normal body temperature (108° F.) there is no other animal which so readily becomes tuberculous or which dies so quickly from this disease. On some dairy farms the hens are everywhere, in the cow stable, in the milk house, in the dwelling-house, and even in the milk-pails. The dairyman, as a rule, has a family of children who are often attacked with the grave diseases of childhood. The milking vessels are frequently washed in the house, and not unusually there is a close connection between the house and the dairy, and sometimes the living-house is, itself, used as a dairy-house. It requires no argument to point out the dangers here; in fact, numerous epidemics have been traced to such a source.

Those who milk the cows are not always free from disease; often we see the milker with hands that are cracked or sore. One of the dirtiest habits which exist in many dairies is that of wetting a cow's teats to lubricate them, to make the milking process easier to the milker. This custom, not rare, unfortunately, is the most common nasty habit permitted in many dairies. If it were not for the good that is sure to follow the agitation of these matters I should hesitate to record that I have myself seen milkers spit upon their hands to wet the teats before they began milking, and then, when there was a certain quantity of milk in the pail, dip their hands into it, and keep the teats dripping wet during the whole process of milking. Cow's teats should not be wetted in any manner, especially in winter, even to wash off dirt if it is already there. This should be removed with a brush or a dry towel. Wetting of the teats very often leads to chapping, and chapping to cracks, and these cracks often become running sores from the constant irritation of the milking process.

In these days of bottled milk the danger of spreading contagion is vastly increased. Bottles which go into rooms where children are suffering from any of the contagious diseases must be a source of danger if they are not subsequently sterilized. Quite recently I had occasion to visit a man who did a large bottled-milk business in New York City. The milk came in wagons from the upper part of Westchester County, and he had a horse-stable half way between his source of supply and New York. Here his horses were changed. All the milk came to this stable in cans, and the empty bottles came back here from New York to be washed. He had two wooden troughs in this stable, and a stove with a large kettle to heat water, and the bottles were washed here in lukewarm water with sal soda, rinsed with cold water, and then filled from the cans.

I think, if some of us followed these bottles around and had seen where some had been, we would want them pretty well steamed and sterilized before we drank milk from them. It is often a source of wonderment to me why we do not have more direct and palpable evidence of trouble arising from just this state of affairs Of course, there are unfortunate results from this sort of carelessness: but how much or how little we are not always able to say. We ought to be able to prevent it by insisting that all milk containers be sterilized with steam under pressure after each usage.

When the dangerous elements are recognized and eliminated from the dairy, then it only requires that the cows be healthy, properly bed and cared for, in order that we may have milk fit to drink and to feed to the baby, without the intervention of the chemist or any of the prevailing laboratory methods, which at the best are only questionable make-shifts.—*Dietetic and Hygienic Gazette.*

Skin-Grafting Extraordinary.

A curious case was tried last week at Sydney, where a woman brought an action for damages against a doctor who had removed fifty-two square inches of skin to graft on a patient who had been severely burned. It must be admitted that this was a rather large draft on any one's abnegation, and the good lady seems to have regretted her generosity when it was too late. Unfortunately for her, the fact that she was a consenting party was held by the jury to exonerate the doctor, so she is minus both skin and damages. Possibly a claim would lie against the beneficiary, though even a committee of experts would find it difficult to appraise the value of skin per square inch. On any future occasion we would suggest that she should stipulate beforehand how much skin she was prepared to "shed." Seriously, however, the plaintiff appeared to have had just cause for complaint, and we are quite unable to approve the conduct of a surgeon who, even by consent, partially flays one person in the interest of another.—*Medical Press and Circular.*

Pharmacology and Therapeutics.

THE REVISION OF THE BRITISH PHARMACOPŒIA.

THE following is a list of additions to the present *Pharmacopœia*, and we append a list of articles and preparations included in the *Pharmacopœia* of 1885 or in the Additions of 1890, but omitted from the present volume:

LIST OF ADDITIONS.

Acid quinine hydrochloride
Araroba
Aromatic syrup
Aromatic syrup of cascara
Belladonna suppositories
Benzol
Bismuth salicylate
Carbon bisulphide
Cocaine
Codeine phosphate
Concentrated compound solution of sarsaparilla
Concentrated solution of calumba
Concentrated solution of chiretta
Concentrated solution of cusparia
Concentrated solution of krameria
Concentrated solution of quassia
Concentrated solution of rhubarb
Concentrated solution of senega
Concentrated solution of senna
Concentrated solution of serpentary
Discs of homatropine
Dry thyroid
Effervescent caffeine citrate
Effervescent lithium citrate
Eucalyptus gum lozenge
Extract of strophanthus
Fresh bitter orange peel
Glycerin of boric acid
Glycerin of pepsin
Hyoscine hydrobromide
Hyoscyamine sulphate
India-rubber
Infusion of broom
Kaolin
Liquid extract of belladonna
Liquid extract of ipecacuanha
Liquid extract of jaborandi
Liquid extract of nux vomica
Liquid paraffin
Lozenges:
  Guaiacum resin lozenge
  Krameria lozenge
  Krameria and cocaine lozenge
  Phenol lozenge
Mercuric oleate
Morphine tartrate
Naphthol
Oil of pine
Oil of rose
Ointments:
  Capsicum ointment
  Cocaine ointment
  Mercuric oleate ointment
  Paraffin ointment
  Rosewater ointment
  Yellow mercuric oxide ointment
Pancreatic solution
Phenol suppositories
Physostigmine sulphate
Pill of quinine sulphate
Prepared coal tar
Quillaia bark
Salol
Solution of coal tar
Solution of ethyl nitrite
Solution of hamamelis
Solution of hydrogen peroxide
Solution of india-rubber
Solution of morphine tartrate
Spirit of anise
Strychnine hydrochloride
Syrup of calcium lactophosphate
Syrup codeine
Syrup of glucose
Syrup of phosphate of iron with quinine and strychnine
Syrup of Virginian prune
Terebene
Thyroid solution
Tincture of quillaia
Tincture of Virginian prune
Tincture (ammoniated) of ergot
Virginian prune bark

List of Omissions.

Acetic extract of colchicum
Aconite leaves.
Alcoholic extract of gelsemium
Amylic alcohol
Animal charcoal
Aromatic mixture of iron
Bael fruit
Bebeeru bark
Beer yeast
Bismuth
Bitter orange
Blistering paper
Bone ash
Bromine
Brown soap plaster
Cabbage rose petals
Canella bark
Carbolic acid suppositories (with soap)
Chalk
Chalybeate plaster
Charcoal poultice
Chlorine poultice
Cinchona bark
Citrate of bismuth
Citrate of bismuth and ammonium
Compound decoction of sarsaparilla
Compound pill of hemlock
Compound tincture of chloroform
Confection of hips
Confection of opium
Confection of scammony
Confection of turpentine
Crumb of bread
Cyanide of potassium
Decoction of barley
Decoction of broom
Decoction of cinchona
Decoction of dandelion
Decoction of Iceland moss
Decoction of oak bark
Decoction of pareira
Decoction of poppy
Decoction of sarsaparilla
Diluted lactic acid
Effervescing solution of lithia
Effervescing solution of potash
Effervescing solution of soda
Elemi
Enema of aloes
Enema of asafœtida
Enema of opium
Enema of sulphate of magnesium
Enema of turpentine
Essence of anise
Essence of peppermint
Expressed oil of nutmeg
Extract of aconite
Extract of calumba
Extract of conium
Extract of hop
Extract of jaborandi
Extract of lettuce
Extract of logwood
Ethereal extract of mezereon
Extract of pareira
Extract of poppy
Extract of quassia
Extract of rhamnus frangula
Extract of socotrine aloes
Ferrocyanide of potassium
Fir wool oil
Fruit of the dog rose
Galbanum plaster
Glycerine of gallic acid
Granulated sulphate of iron
Green hellebore rhizome
Gutta percha
Hemlock poultice
Honey
Iceland moss
Infusion of catechu
Infusion of chamomile
Infusion of jaborandi
Infusion of kousso
Infusion of linseed
Infusion of matich
Infusion of valerian
Inhalation of chlorine
Inhalation of conine
Inhalation of creasote
Inhalation of fir wool oil
Inhalation of hydrocyanic acid
Inhalation of iodine
Kamala
Lactic acid
Larch bark
Leaf tobacco
Lettuce
Linseed poultice
Liquid extract of bael
Liquid extract of rhamnus frangula
Manna
Mastiche
Matico leaves
Meconic acid
Mercurial suppositories
Milk
Morphine suppositories (with soap)
Mucilage of starch
Mulberry juice
Mustard poultice
Nitrate of ammonium
Nitrate of copper
Nitrate of lead
Nitrate of sodium
Oak bark

Oil of rue
Oil of savin
Ointment of calumba
Ointment of elemi
Ointment of savin
Ointment of sulphurated potash
Ointment of tartarated antimony
Ointment of turpentine
Oleate of mercury
Oleate of zinc
Oleo-resin of cubebs
Opium lozenges
Pearl barley
Peroxide of iron
Persulphate of mercury
Physostigmine
Pill of carbonate of iron
Pill of iodide of iron
Prepared calamine
Proof spirit
Purified animal charcoal
Purified bismuth
Raisins
Refined silver
Rhamnus frangula bark
Sabadilla
Savin tops
Santonica
Scammony mixture
Simple ointment
Solution of bimeconate of morphine
Solution of chloride of antimony
Solution of chloride of calcium
Solution of citrate of magnesium
Solution of dialysed iron
Solution of gutta percha
Solution of iodine
Solution of sulphate of morphine
Solution of soda
Squirting cucumber fruit
Star-anise fruit
Strong solution of acetate of ammonium
Strong solution of acetate of iron
Strong solution of citrate of ammonium
Strong tincture of ginger
Sulphate of beberine
Sulphate of cinchonidine
Sulphate of cinchonine
Sulphate of morphine
Syrup of mulberries
Syrup of poppies
Syrup of sulphochloride of iron
Tannic acid suppositories (with soap)
Tincture of acetate of iron
Tincture of ergot
Tincture of galls
Tincture of green hellebore
Tincture of larch
Tincture of lobelia
Tincture of orange peel (dried)
Tincture of savin
Tincture of valerian
Treacle
Valerianate of sodium
Vinegar
Wheaten flour
White marble
Wine of aloes
Wine of rhubarb
Wine of opium
Yeast poultice

While the above lists nominally represent the additions and the omissions, it is perhaps necessary to point out that the names of many of the preparations and articles in the *Pharmacopœia* of 1885, or in the additions of 1890, have been altered in the present edition, and accordingly the equivalents of certain articles given as omitted may appear under other titles. The alterations generally are not likely to give rise to any confusion. In some cases the alteration is merely a slight change of spelling, and frequently only affects a single letter: for example, asafœtida is now written asafetida, and creasotum is now changed to creosotum. Such changes, althongh they are probably the outcome of considerable research, may not attract much attention. Many of the other names however, have been altered on chemical grounds, as, for example, with the hydrochloric compounds of alkaloids, which were formerly termed hydrochlorates, and now become hydrochlorides. In some cases the change indicates the mode of employment: thus the liquor cocainæ hydrochloratis is now termed injecto cocaine hypodermica. Two changes only are likely to attract

much attention: the one is the alteration of the name tabellæ nitroglycerini to tabellæ trinitrini; the other is the reversion to an old term, the compound asafetida pill being now termed officially Pilula Galbani Composita.

In the last *Pharmacopœia* some preparations which contained two or more active ingredients did not show their compound nature by their name: such misleading titles have now been amended.—*B. M. J.*, April 9th, 1898.

FORMALDEHYDE AS A PRESERVATIVE OF MILK.

Prof. J. N. Hurty does not share the misgivings which have been expressed lest the use of this antiseptic provoke dyspepsia. He states (*American Druggist*): For a child affected with marked indigestion, obviously due to fermentation, I recently recommended that cow's milk be treated immediately after being taken from the animal with five drops of 40-per-cent. solution of formaldehyde to each quart, and that the child be fed with the milk thus treated. Two weeks' trial of pasteurized milk had not brought relief. Within ten days after commencing the use of the formol-milk a decided improvement was apparent. Its continuation resulted in complete cessation of the symptoms. Now, after ten weeks' trial, with two intermissions, which admonished a return to formol milk, the child is in excellent condition. Upon the principle that it is best to do without all substances of this character when not actually needed, the formol has been discontinued, and the strength gained while using it has so far (six days) sufficed to contend against the influences which were before prominent. The most careful examination fails to discover that any stomach or bowel lesion exists. If a "lifelong dyspepsia" should very soon begin, it would not be entirely unfair to conclude that the formaldehyde was caustic to a considerable degree, although acute indigestion undoubtedly existed prior to its exhibition.

Formaldehyde in Acid Indigestion.

Being cursed myself occasionally with indigestion, I have used formaldehyde as a preventive of the fermentation which causes the acidity, with most excellent results. Whenever the acid condition develops, I immediately abandon all foods except milk, and this I take, drinking it slowly, after adding to each eight ounces ten drops of 40-per-cent. solution of formaldehyde. The results have been excellent, and although I have taken the agent in this way many times during the last year and a half, only the most desirable effects have been observed. For one week, as experiment, I took three times a day, after meals, four ounces of milk containing five drops of 40-per-cent. formaldehyde solution. Not the least untoward result at the time or since has been noted.

Proceedings of Societies.

TORONTO CLINICAL SOCIETY.

THE forty-sixth regular meeting of the Toronto Clinical Society was held in St. George's Hall, Toronto, May 11th, 1898.

President Dr. Albert A. MacDonald in the chair.

The following Fellows were present: A. A. MacDonald, J. A. Temple, G. S. Ryerson, W. H. B. Aikins, A. Primrose, G. A. Peters, G. Boyd, F. Fenton, H. A. Parsons, A. Baines, W. Oldright, R. Dwyer, J. N. E. Brown.

Dr. Brown gave notice of motion, "That in view of the fact that the Clinical Society had its full quota of Fellows, and as there was a number of eligible applications for fellowship, any Fellow absenting himself from all of the meetings of the Society for one year should have his name struck from the roll."

Dr. William Oldright presented a boy, whom he had operated upon for talipes equinus, doing a tenetomy of the tendo achilles. The patient was aged six, and the trouble had been in existence since he was eighteen months old. The affection had supervened after a long walk. Photographs before and after the operation were shown. He had applied a plaster paris splint to keep the foot in the corrected position. The boy was wearing a thick-soled shoe on the affected side.

Dr. Primrose stated it to be his experience that most cases of talipes equinus were the result of injuries. He reported a case following a gun-shot wound, in which the bullet had entered the palm of the hand and had passed completely through the carpus, and lay situated on the dorsal aspect of the wrist below the head of the ulna. The "X" rays revealed the situation of the bullet, and only a small incision was necessary to extract it.

The doctor reported a second case, that of a boy who was accidentally shot by a 44-calibre revolver last Christmas. The bullet entered the body at about the level of the tenth rib, three or four inches from the median line. It was probed for at the time unsuccessfully. The wound healed up. About eight months after the boy complained of pain in the hypochondriac region. This was followed by the vomiting of blood and purulent material. The patient became very weak: the "X" rays were used and showed a tumor of the left hypochondriac region. A tumor in this region could be felt, and it was a question whether it was in the abdominal wall or not. An exploratory incision revealed an enlarged spleen. It appeared from inquiry that the patient had

suffered from malaria, although the blood count showed only 220,000 white corpuscles.

Dr. Primrose reported a third case, in which the patient was injured from the bursting of a gun. The man had been experimenting with smokeless powder and had used too heavy a charge. The left arm was severely lacerated by a piece of the barrel. It was probed for but could not be felt. The "X" rays showed it distinctly, lying between the bones of the forearm. In the upper arm there was a piece of the barrel, quarter of an inch square, to be seen in front of the humerus. A good deal of cellulitis had set in. Operation was done, the piece in the lower arm being found, the upper one not. The patient was improving. An interesting nerve involvement had taken place involving the median and ulnar nerve.

Dr. Boyd, who had charge of the case Dr. Primrose reported first, said he was able to reach the bullet with a probe, but thought it wise not to attempt to extract it through the palm for fear of dangerous hæmorrhage.

Dr. Parsons discussed the question of leucocytosis in malaria, pointing out that as long as the malarial organisms exist in the body the leucocytes will not increase, but so soon as quinine is administered there is a regular inflammatory leucocytosis.

Dr. Primrose closed the discussion.

Dr. W. Oldright presented a patient upon whom he had resected a portion of two ribs for necrosis.

Dr. Oldright presented another patient from whom he had removed a wedge-shaped portion of the first meta-tarsal bone to correct the malposition of the great toe caused by a bunion.

Dr. J. A. Temple presented a specimen of an ectopic gestation which he had removed from a woman aged twenty-four, mother of one child. Two weeks before she consulted him she suffered from pain in the left side. She had missed two periods. The rupture had induced a state of collapse. After a good deal of persuasion, an operation was consented to, and done at eleven p.m., when the patient was almost *in extremis*. The abdomen was found full of blood and the break close to the corner of the uterus, so close, indeed, that the corner of the uterus had to be transfixed to secure the pedicle. Hypodermics and rectal administration of stimulants was resorted to, and the woman made a good recovery. One point that had rendered the diagnosis more difficult was that the woman positively asserted that she was not pregnant. She stated that she had missed her periods frequently. The text-books would lead us to believe, Dr. Temple asserts, that the accident occurs only in women near the menopause, or in those who have borne no children for some years. The above case, with several others he had seen, led him to disagree with this statement of the authors.

Dr. MacDonald discussed the question of pain in ectopic gestation and the causation of the trouble.

Dr. A. Primrose presented a hernial mass containing a piece of the omentum adherent to the sac. This procedure, he stated, shortened the operation very much.

Dr. King presented two similar specimens, in the removal of which he had followed a similar plan.

Dr. W. Oldright discussed the question.

The election of officers for the coming year was then proceeded with, and resulted as follows:

President, F. LeM. Grasett; vice-president, G. A. Bingham; corresponding secretary, H. A. Bruce; recording secretary, John N. E. Brown, re-elected; treasurer, W. H. Pepler; council, W. B. Thistle, G. Boyd, F. Fenton, H. J. Hamilton and G. Chambers.

The retiring president, Dr. MacDonald, was then tendered a vote of thanks for the acceptable manner in which he had presided over the meetings for the past year. He, in a few words, expressed his thanks to the Society for their appreciation of his efforts, and for the assistance they had given him during the year.

The Society then adjourned for refreshments.

The next meeting will be held on the second Wednesday in October.

The Sleep Problem.

As town life extends, and intellect is aroused, the problem will be more and more that of too little, not of too much sleep. Perfect or nearly perfect health is of course the first condition of sound sleep. But scarcely anyone is quite healthy, and so we must aid the sleepless to acquire that which is lacking. The one great thing to do is to fatigue the attention; not only to tire the body but also the active mind; to quiet the vasomotor centre and so drive the congested blood from the brain. Quiet and regular habits, a certain monotony of light evening occupation, will tend in this direction, while a great variety of evening engagements is generally fatal to the victim of insomnia. It is unwise to go to bed on either an empty or a very full stomach; a slight meal before rest is the wise course. A hot bath the last thing, taken under the following conditions, is perhaps the very best aid to sleep: As recommended by Eccles and others, the bath should be taken in a room with a temperature of 65° to 70° F. The patient should stand with his head over the edge of the tub, douching head and face with water at 100° F. The cooling of the body by the air and the hot sponging of the head first send blood to the brain, dilating its vessels. Then the entire body, except the head, is immersed in a bath at 98° F., rapidly raised to 105° or 110° F.; in a few minutes the bath is left, and the body wrapped in blankets, which absorb the moisture, and with the least possible exertion the patient gets into his night clothes and to bed with a warm bottle to his feet and perhaps a little warm liquid food.—*Dietetic and Hygienic Gazette.*

The Canadian Journal of Medicine and Surgery

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Doctors will confer a favor by sending news, reports and papers of interest from any section of the country. Individual experience and theories are also solicited.

Advertisements, to insure insertion in the issue of any month, should be sent not later than the fifteenth of the preceding month.

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Editorials.

SOME SHORTCOMINGS IN SCHOOL-HOUSES AND THE REMEDY.

In the May number of the *Sanitarian* appears an abstract of the report of the Visiting Committee of the Buffalo School Association. This is a voluntary association of persons, whose aim is to improve existing conditions in the grammar school-buildings. Their recommendations, which are very comprehensive, refer to matters of vital importance, and would seem to indicate that a large number of the public schools of Buffalo are a menace to the health of their pupils.

Though the occasion for the exercise of the good offices of this committee is scarcely a matter over which the citizens of Buffalo need congratulate themselves, still, the fact that the work of remonstrance has been done, and well done, by a voluntary association, is a good instance of the capacity of Americans for self-government. There is no doubt that the conclusions of this committee should have great weight in the community, and, as Buffalo is a wealthy city, the reproach of unsanitary and unsightly school-buildings ought soon be taken away from it.

This subject has a considerable interest for the people of Toronto at the present time for we are subject to a like infirmity. In a recent report presented to the Hon. G. W. Ross, Minister of Education of Ontario, the secretary of the Provincial Board of Health shows that one-twentieth of the public-school population of Toronto is unprovided with permanent school accommodation. Stores, dwellings, and rooms in churches are utilized as substitutes for school-houses, and, as one would expect, are objectionable for various reasons: deficient floor space and cubic air space, bad ventilation and heating, poor lighting, unsatisfactory conveniences, absence of play-grounds and unsuitable locations.

The buildings referred to are makeshifts, used during hard times to lighten the load of civic taxation, while, at the same time, the school trustees are enabled to house, however imperfectly, children who demand a public-school education, not as a favor but as a right. When better times return, the City Council will respond to a demand for proper accommodation in a suitable manner.

In this case, the sanitary reformer has the taxpayer on the hip. There is, however, another side to this question, in which the sanitary reformer appears to have led the taxpayer into expense, and has failed to give him value for his money. A school may be erected on an appropriate site, light, heat and cleanliness may be provided for in every room, and yet, although a costly system of artificial ventilation has been installed, the resulting ventilation may be imperfect, or even positively bad. Here, the responsibility would seem to rest on the shoulders of the sanitary reformer or the contractor. It is easy to condemn the primitive ventilation, resulting from open windows in a stove-heated room; but it is difficult to provide an artificial system of ventilation, which will stand the test of a scientific investigation.

The following quotations from a report presented by the writer

of this article to the Provincial Board of Health are given as proofs of the soundness of this contention: "Report on the ventilation of a room in D—— School, Toronto, Jan. 7th, 1897. Weather, cloudy; wind, south; temperature, 27° F.; humidity, 67°; barometer, 29.891. Room 8, third floor, east side; seating capacity, 58; persons present, 49; net air space, 12,163.83 cubic feet; air space per head, 284.24 cubic feet; temperature at the teacher's desk, 69 F.; difference in temperature at the breathing line over the greater portion of the room, 1° F.; temperature of the air at the warm-air inlet, 128° F. Two window sashes were lowered at the top—one eight inches, the other five inches. There was a large foul-air duct in one corner of the room, the shaft of which was heated by steam coils. The available area of its opening in the room was 4.27 square feet. When the doors and windows were closed, 320.25 cubic feet per minute, or 19,215 cubic feet per hour, of air were removed through the foul-air duct. Fresh-air supply at the inlet, 600 cubic feet per minute, or 36,000 cubic feet per hour. Amount of pure warm air supplied per minute per head, 12.24 cubic feet. Amount of foul air removed per head per minute through the foul-air duct, 6.53 cubic feet. When the windows were open, there was no current in the foul-air outlet. The open windows acted both as inlets and outlets; but the amount of air introduced and extracted by them was not estimated, as the supply was irregular and capricious. Carbonic acid, in parts of 1,000 of air, .806; time of test, 3.15 p.m. The warm air supplied was insufficient in quantity and of too high a temperature, so that cold air had to be introduced in an irregular fashion to supply the defects under both these heads. Even, with the open windows, the supply of fresh air was small, as was proved by the amount of carbonic acid in the air. The high temperature of the warm air at the inlet, ranging from 120° to 150° F., made it difficult for pupils to occupy the corner where the hot-air register was situated. As soon as the air of the room became superheated, the windows had to be opened, allowing at the same time a considerable waste of heat. The room is heated by steam pipes, direct and indirect. The indirect heating consists of pure air warmed by passing over steam coils in a shaft, which begins in the basement and ascends vertically through the building, allowing the warm air to enter the room through a register. In very cold weather direct steam-coil heating is superadded. The conditions observed in Room 8 are similar in fifteen other rooms in this school-house. The system in use in D—— School may be

pronounced a complete failure as a method of artificial ventilation."

This may profitably be compared with the following: "Report on the ventilation of two rooms in the C—— street school, Toronto. Date of inspection, December 17th, 1896. Weather, overcast and mild: wind, southeast; temperature, 33.8° F.; humidity, 61 %; barometer, 29.85. Room 4, ground floor, northeast side: seating capacity, 64: persons present, 50; net air space, 11,738.17 cubic feet: air space per head, 235.66 cubic feet: temperature at the teacher's desk, 67° F.; humidity, 55%; difference in temperature in different parts of the room at the breathing line, 3° F.; temperature of the air at the inlet, 71° F.; fresh air supply per minute, 1,650 cubic feet; air removed at outlet (estimate) per minute, 1,650 cubic feet; amount of air supplied each pupil per minute, 30.8 cubic feet; air of room changed in 7.14 minutes; carbonic acid in parts of 1,000 of air, .537; time of test, 3.20 p.m. The building, a twelve-room school, is heated and ventilated by the Smead-Dowd system. At the time the test was made, the fires were getting low, and the results obtained would show the average of all kinds of weather."

To make the points brought out in these inspections clear to our readers, we will quote the requirements called for in the heating and ventilation of school buildings in Massachusetts.

"1. That the apparatus will, with proper management, heat all the rooms, including the corridors, to 70° F., in any weather.

"2. That with the rooms at 70 F., and a difference of not less than 40° F., between the temperature of the outside air and that of the air entering the room at the warm-air inlet, the apparatus will supply at least 30 feet of air per minute for each scholar accommodated in the room.

"3. That such supply of air will so circulate in the rooms that no uncomfortable draughts will be felt and that the difference in temperature between any two points, on the same breathing plane, in the occupied portion of a room, will not exceed 3°.

"4. That vitiated air, in amount equal to the supply from the inlets, will be removed through the ventiducts.

"5. That the sanitary appliances will be so ventilated, that no odors therefrom will be perceived in any portion of the building."

"To secure approval by the Department of plans showing methods or systems of heating and ventilation, the above requirements must be guaranteed in the specifications accompanying the plans."

It will, therefore, be seen that, in the opinion of the officers of the Department of the Inspection of Factories, Workshops and Public Buildings in Massachusetts, good results in heating and ventilation are obtainable, if the contractors are held down to the regulations imposed by the statutes and, in practice, the inspectors of this Department will not pass a building unless the tests can be complied with. These clear-cut rules and this definite plan of action present the vital questions of heating and ventilation in a manner totally different to what we are accustomed to in this country. Certainly, however, if we wish to have ventilated schools and to get value for our money we would do well to imitate Massachusetts and to demand legislation, making regulations similar to those we have quoted above.

In our opinion real progress in the ventilation of schools will not take place unless:

(1). A Provincial Sanitary Inspector is appointed who shall have power to see that all plans for new schools shall have sufficient flue space to furnish at least 1,500 cubic feet of air per hour per pupil. This should be the minimum amount.

(2). After new school buildings are erected, there should be a practical inspection by scientific tests to see whether the ventilating apparatus fills the requirements, and in default of its doing so, the contractor should be obliged to make the necessary changes.

(3). The same authority should have power to order changes in the worst of the old schools now in use, so that a larger amount of air and better air may be supplied.

The sanitary arrangements of the school should also be under the control of the same power. J. J. C.

THE ONTARIO MEDICAL ASSOCIATION.

The Eighteenth Annual Meeting of this vigorous Association will be held in our Queen City of Toronto on Wednesday and Thursday next, June 1st and 2nd.

Dr. Ross, Minister of Education, has again kindly allowed the Education Hall of the Normal School to be used as the meeting place.

This meeting promises to be exceptionally well attended, judging from the large number of intimations of their intention to

be present from medical men throughout the province, from Ottawa and Montreal on the east, to Windsor and Sarnia on the west.

Dr. Britton, the President, has shown unusual ardor in the work of the Association, and the members of the Committees on Papers and Arrangements, chosen by him, and upon which the major part of the Association work falls, have worked in hearty accord with him to present a programme of good material and complete arrangements for a warm, welcome reception for our brethren throughout the Province. A luncheon at the Royal Canadian Yacht Club, a cruise on the Bay, a smoking concert genially tendered by Dr. Ryerson, who presides over the Committee of Arrangements, and numerous private receptions, will be on the entertainment programme.

We take this opportunity, just on the eve of the meeting, of urging every doctor throughout the Province, who can, to be present at the meeting. Every man of good standing in Ontario is eligible for membership on payment of the fee of two dollars, which is not exacted each year, except on attendance. The very cheap railway fares, too, will be a strong factor in making the attendance large.

We append the list of papers:

Provisional Programme.

The President's Address.—Wm. Britton, Toronto.

Papers by Guests: Syphilitic Cirrhosis.—J. G. Adami, Montreal.

Pancreatitis, from a Surgical Standpoint.—James Bell, Montreal.

Discussion in Medicine: Excretion in Cure and Immunity.—H. A. McCallum, London; followed by H. B. Anderson and R. J. Dwyer, Toronto.

Discussion in Surgery: Treatment of Fractures of the Skull.—George A. Peters, Toronto; followed by George S. Rennie, Hamilton; V. H. Moore, Brockville; and A. B. Welford, Woodstock.

Discussion in Gynecology: Carcinoma of the Uterus.—T. K. Holmes, Chatham; followed by H. S. Griffin, Hamilton, and J. W. S. McCullough, Alliston.

Operative Methods in the Conservative Treatment of Tuberculous Joints.—Alex. Primrose, Toronto.

Oöphorectomy for Fibroids of the Uterus.—Albert A. Macdonald, Toronto.

The Injurious Effects of Our Over-Wrought School System on the Health of Public and High School Pupils.—R. Ferguson, London.

Immunity.—J. J. MacKenzie, Toronto.

The Effect of the Climate of Our Canadian North-West on Tubercular Patients.—P. H. Bryce, Toronto.

Supra-Pubic Prostatectomy: With Cases.—Angus MacKinnon, Guelph.

The Traumatism of Labor.—C. B. Oliver, Merlin.

Endometritis with Erosions of the Os.—J. F. W. Ross, Toronto.

The Early Removal of Tubercular or Necrotic Areas.—H. H. Oldright, Toronto.

Rhumatoid Arthritis in Children.—W. B. Thistle, Toronto.

When Should We Operate? Illustrated by cases and specimens.—Wm. Oldright, Toronto.

My Experience with Diphtheria During the Fall of 1897.—Wm. Doan, Harrietsville.

Hyper-Resonance of the Chest, a Premonitary Symptom of Tuberculosis of the Lungs.—W. C. Heggie, Toronto.

The Medical and Surgical Treatment of the Insane.—A. T. Hobbs, London. Discussed by R. M. Bucke, London, and R. W. Bruce Smith, Hamilton.

Cretinism in Ontario.—A. McPhedran, Toronto.

Recent Improvements in the Preparation of Cat-Gut and Gauze. N. A. Powell, Toronto.

Puerperal Complications.—H. D. Livingstone, Rockwood.

Experiences with New Remedies.—G. S. Ryerson, Toronto.

Vicarious Urination.—A. T. Rice, Woodstock.

A Brief Sketch of the Nervous System, of Its Liability to Injury and Some of Its Diseases.—I. Bryon Newman, Detroit.

The Various Operative Methods of Dealing with Eyes Lost Through Injury or Disease.—G. H. Burnham, Toronto.

Epithelioma of the External Ear.—F. N. G. Starr, Toronto.

A Comparison of Lumbar and Inguinal Methods in Colostomy.—Herbert A. Bruce.

The Pharmacology of the Cresols.—W. Beattie Nesbitt, Toronto.

Toxæmia of Pregnancy.—C. J. O. Hastings, Toronto.

Hypo and Hyper-Respiration in Pulmonary Tuberculosis.—E. Playter, Ottawa.

Infant Diet.—W. J. Greig, Toronto.

Remarks on the Treatment of Club-Feet, Based on the Personal Observation of 243 Cases.—B. E. McKenzie, Toronto.

Exhibition of Machine for Manufacturing Plaster Paris Bandages.—H. P. H. Galloway, Toronto.

Management of Difficult Breech Presentations.—A. H. Wright, Toronto.

Rosacea.—Graham Chambers, Toronto.

Fifteen minutes shall be allowed for the reading of papers. It is strongly urged that those who read papers will make them short and practical.

There will also be a pathological exhibit. Members having specimens are invited to bring them.

A Clinic will be given on the afternoon of the second day, at the Victoria Hospital for Sick Children.

The Committee of Arrangements are making preparations for the entertainment of members, the announcement of the features of which will appear in the permanent programme.

A STENOGRAPHER FOR CORONERS' INQUESTS.

THE recent case of Mrs. Sternaman, with its trial for murder and its swinging balance weighing first, "Guilty," and adjusting itself slowly to "Not guilty," has turned the eyes of the people upon the many persons of necessity who took part in this *cause celebre*, from

legal dignitary down to the most humble witness. Upon the coroner has been turned the full public gaze, and more clearly than ever has been seen how important is his written evidence and the necessity that he should take down what the witnesses say fully and with absolute correctness. Even the minor details often prove important factors upon which hinge grave results. Memory, no matter how retentive, or how perfect seems the photograph of words and sentences upon its plate, is a poor medium to conjure with when a human life hangs in the balance. Coroners are not provided with stenographers, consequently how arduous the task of both listening to and writing down the evidence fully.

The coroner's inquest is, of course, a court of record, and not one of judgment. Its object is a searching for facts, on the basis of which the Crown works up its case. Since Sir John Thompson's Act, known now as the Criminal Code, came into force some years ago, immediately previous to the Lucky murder trial an accused person has had the privilege, if so desired, of going into the witness box and giving under oath his own evidence. A more recent judgment, however, has enacted that the evidence of an accused person, taken by a coroner, cannot be admitted as evidence against him in a higher court, f r the reason that the said person in the coroner's court has not accorded to him the same protection as he would have elsewhere. It will be remembered that it was owing to this judgment that Hammond, the Bracebridge wife poisoner, was granted a third trial. It cannot but be admitted, therefore, that with the services of a stenographer an investigation before a coroner would be much more perfect and would give the accused the benefit of all he or she might say in the box, be that evidence ever so halting. Such evidence would become a definite statement. If true, it could not be gainsaid, and if not true, would be the means of assisting the Crown and bringing conviction home. Supposing a witness who had given evidence before a coroner, for instance, and such evidence had been taken down by a stenographer, were to die before the trial in the High Court, how vastly important the services of the stenographer would be in such a case. It would be similar to an examination before a Commissioner. In the same way regarding any quibble which might be raised afterwards as to irrelevant evidence taken by a coroner: with a stenographer taking down the very letter of the evidence given, and the coroner making notes as to the spirit of the same, there is no question that the succeeding trial would be greatly facilitated in every way.

We realize, therefore, how important is the need of a better equipment for recording evidence than at present exists at inquests, and we join in a plea to the Attorney-General asking that the Department speedily cause an official stenographer to be granted to assist the coroner by being present at all inquests, as is the custom in the Court of Assize. The verbatim report of the stenographer would silence all after-contention as to the correctness or incorrectness of statements made, and in many cases also render further legal argument unnecessary, and consequently forward the interests and hasten the ends of justice. W. A. Y.

EMBALMING FLUIDS AND TRIALS FOR MURDER.

That an embalming fluid and a solution containing arsenic are convertible terms, will, probably, obtain credence among some of the laity, who read the report of the second trial of Mrs. Sternaman, at Cayuga, for causing the death of her late husband by the administration of arsenic.

The undertaker, who had charge of the funeral of the deceased, Sternaman, swore, that he did not remember whether he had or had not used embalming fluid in preparing the corpse for burial.

Assuming, for the sake of argument, that he could have sworn positively to the use of an embalming fluid, it should have been necessary for the defence to prove, by competent evidence, that this fluid, or a fluid made up according to the same formula, did really contain arsenic. Otherwise, the contention that the arsenic, which was found in the body of the deceased had been put there, post mortem, by the undertaker, could not reasonably be maintained. No effort was made to prove that the undertaker's embalming fluid was an arsenical solution. That was taken for granted, and it simply remained to argue, that such a hypothetical fluid might have been employed by the undertaker.

The jury, on such evidence, concluded, that the arsenic found in the body of the deceased had been introduced by the undertaker, during the process of embalming, and was not proof of criminal poisoning by the accused.

It does not appear, in the recital of the evidence, that the undertaker was asked to state if he knew the composition of the fluid which he ordinarily used for embalming purposes, and it is quite likely that he did not know, for certain, what it contained.

Embalming fluids, the formulæ of which are secret, are sold to undertakers by jobbers, the chief recommendations in favor of any given preparation being reliability and cheapness. While it is true that many fluids in common use for embalming are arsenical, there are many efficacious embalming preparations in regular use, which do not contain arsenic.

A distinct advance in embalming has been made by the introduction of the forty per cent. solution of formaldehyde. It is inexpensive, and is most efficacious as a deodorizer and preservative of dead bodies. Owing to its disagreeable odor and burning taste, it is free from the objection, that it may be used during life as a poison for criminal purposes. So that, while it answers the purposes of the embalmer, its subsequent discovery in a corpse would be of little or no importance from a medico-legal aspect.

In view of these facts, we would suggest, that the Provincial Government be requested to introduce legislation, declaring the use of arsenical solutions in the embalming of dead bodies to be illegal. As an evidence of good faith, the formula of every embalming fluid, used or sold in Ontario, should be sent to the secretary of the Provincial Board of Health. J. J. C.

THE ONTARIO MEDICAL COUNCIL AND INTER-PROVINCIAL REGISTRATION.

At the last meeting of the Canadian Medical Association, the Inter-Provincial Registration Committee reported thus: "Your committee beg leave to report that the Medical Councils of Quebec, Prince Edward Island, Nova Scotia, New Brunswick and Manitoba have signified by resolution their approval of the resolutions of the Committee of 1896, and have accepted them as a basis of agreement for inter-provincial registration. We therefore recommend that the matter be referred to the councils mentioned to formulate an agreement and carry it into effect."

It will be pleasing to our readers to learn that since then the Council of the North-West Territory has acquiesced, leaving only Ontario and British Columbia to come in, and thus bring about a condition of affairs that will easily lead to reciprocal registration.

Some members of the Ontario Medical Council, who were present at the Canadian medical meeting last year, brought neither credit upon the Council nor upon themselves by their actions, for

it was felt that for some time past they had been "blowing hot," at the Canadian medical and then "blowing cold" when the matter was brought up in the Ontario Council, thus blocking the matter behind the screen of sec. 26 of our Medical Act, saying, "We are all prepared, just as soon as you can come up to our standard."

They seem to forget that this reciprocity will be a great benefit to Ontario, in that it will open up to Ontario's graduates four provinces in which there is no medical school and two in which the schools are small. Of course we are well aware of the fact that our Ontario barriers have kept many *incompetents* out of this Province, but it is probably also true that they have kept many a similar class in; for, having "passed the Council" here, they fear to take chances elsewhere. The councils of the willing provinces are cognisant of the fact that inter-provincial registration may for a time overcrowd their ranks; but they feel certain that time will remedy that, and during the intervening period they are willing to take the risk for the sake of a betterment of the general condition of the profession in "our own, our native land." If the members of our Council would just sit down and *think* this thing out, instead of constantly endeavoring to gratify their insatiable desire to *talk*, they might arrive at a reasonable solution of the difficulty.

We shall watch carefully the attitude of the new member for the West Toronto Territorial Division, that we may learn what election promises are worth.

THE ARMY SURGEON.

Shall this century, which has done so much for the enlightenment of humanity, end in "a baptism of blood and tears," is a question that will soon be answered. Already the dread of a long nation-stirring conflict is in the air, and many are leaving home and friends to answer the bugle call. But perhaps to the surgeon, who goes with his corps, will fall the strangest and most heart-wearying tasks, without even the stimulus of martial music or the *camaraderie* of the regiment, a little apart from the excitement of the "thick of the fight," will he wage the solemn warfare with death. He alone is permitted to see the soldiers' courage ebb, as wounded and dying they lie:

for pain is often the only enemy before whom men quail. On the weary surgeon struggles, armed only with the weapons that *bind* together bone and tissue instead of *shatter* and *tear* them, his conflict never ending through the days of intense heat, and the nights, whose stillness echoes with the groans of the wounded; sometimes he records a victory, often, alas, a defeat.

In the eyes of the busy world the army surgeon is less thought about and receives fewer plaudits than his comrades who shoulder the musket. He has stepped up out of the ranks of the medical profession, and we delight to honor him with the small tribute of a word, for a thought in the heart of one's fellows is acceptable even to the sternest clay. So three cheers for the army surgeon, and when peace reigns may he return to his *own* fireside realizing that life during the troublous times has been to him, perhaps, "not a having and a getting, but a being and a becoming."

W. A. Y.

THE INTERNATIONAL ASSOCIATION OF RAILROAD SURGEONS.

The date of the 1898 annual convention of this important association comes on apace. As our readers are aware, it meets in this city on the 6th, 7th and 8th of next month. From present appearances, there is every reason to expect that there will be in this city at least 600 surgeons from the other side of the line, not to speak of the large attendance of medical men from all parts of Canada. The arrangements so far for the meeting are well under way. The sessions will be held in the Normal School buildings, and a large exhibit of surgical instruments and appliances will be made in a well-lighted adjoining room by the principal houses from the United States as well as our own country. The committee who have charge of the entertaining of the guests are making every effort to see to it that the social side of the meeting is not neglected, but, on the other hand, made a principal feature. The Niagara Navigation Company, the Niagara Falls Electric Road, and the Muskoka Navigation Company have all kindly granted free transportation over their roads to visiting surgeons. The city and Government have given liberal money grants to the association. There will be quite a number of most interesting papers read, one at least of which will be by Dr. P. H. Bryce. His subject will be "The Relation of Public Health Authorities and Railways in the Transportation of Corpses." W. A. Y.

CHLOROFORM AND ILLUMINATING GAS.

It has been frequently observed, that chloroform, when administered by gas light, causes fits of coughing in persons present in the room. This has been occasionally referred to in the medical journals, and has been passed over as of slight importance, being due to the inhalation of the products of combustion of chloroform. Recently, at the hospital of Berne, Switzerland, death occurred as the result of this inhalation of toxic products. Dr. Mey, one evening, with the assistance of another physician and two sisters, performed an operation for an abdominal wound. During the operation, which lasted several hours, the physicians had severe fits of coughing, which they attributed to the chloroform. Some hours after the operation, Dr. Mey felt a good deal of distress, and had a severe attack of dyspnœa. The two sisters were similarly attacked during the night, and one of them died.

This untoward behaviour of chloroform, when administered by gas light, would seem to be another argument in favor of the electric light. J. J. C.

THOSE MUNYON DOCTORS.

The Discipline Committee of the Ontario Medical Council are to be congratulated upon the manner in which they "carpeted" some unworthy members of our calling last month. As far as this branch of the service rendered the profession by the College of Physicians and Surgeons is concerned, even the grumblers cannot complain. That it is most important that the Medical Act be enforced in such cases as the ones to which we refer herein, no one will deny. Black sheep of the ordinary type must be excluded from our flock, but when such flagrant disobedience to the mandates of ordinary professional decency come to light, we cannot but think that the Discipline Committee in sending their report to Council, which meets so soon now, will do their duty and speedily have the names of the offenders erased from the College Roll, thus teaching them a well deserved lesson. To Detective Wasson is due great credit for the manner in which he worked up his "Munyon" evidence. We hope his attention will be drawn now to, and summary treatment afforded to, say, *catarrh specialists*.

W. A. Y.

Correspondence.

The Editor cannot hold himself responsible for any views expressed in this Department.

THERE IS SOMEWHAT OF A RESEMBLANCE, ISN'T THERE?

To the Editor of The Canadian Journal of Medicine and Surgery :

Dear Sir,—The enclosed clipping from the *Philadelphia Medical Journal* may prove interesting to some of your readers :

"A FEUD IN THE NEW YORK UNIVERSITY.

"It is now openly charged that the council of the University has broken faith with the other party; that the faculty was appointed by the Executive Committee without consultation with either the Medical Committee or the medical faculty : that instead of fixing the salaries, the Executive Committee has voted that compensation should be limited to what they could earn by their own labors, without giving any credit for the property transferred to the University; and that numerous items of expense have been imposed upon the medical faculty which are not properly chargeable to them. . . . An influential minority of the trustees were convinced that they could not honorably retain possession of the property of the Medical College Laboratory if they continued to use it contrary to agreement and the wishes of the donors, and a special committee appointed by the board to investigate these differences, so reported, but the majority, under the leadership of Chancellor MacCracken, refused to accept the report of this committee. The Chancellor has refused to issue a statement of his side of the controversy."

It would seem as if the Chancellor and Executive referred to above resemble some people of lower rank we have heard about in Toronto. Possibly if there was "something in it for the defence," the Chancellor would make an effort to defend himself.

Nemo.

A number of our fraternity have joined the St. Alban's Cricket Club, and can be seen on Tuesdays and Thursdays, about four o'clock, with their flannels on practising on the club's grounds on Howland Avenue.

The Physician's Library.

An American Text-Book of Genito-Urinary Diseases, Syphilis and Diseases of the Skin. Edited by L. Bolton Bangs, M.D., Consulting Surgeon to St. Luke's Hospital and the City Hospital, New York, and to the Methodist Episcopal Hospital, Brooklyn: Visiting Genito-Urinary Surgeon to St. Mark's Hospital, New York; late Professor of Genito-Urinary and Venereal Diseases, New York Post-Graduate Medical School and Hospital; and W. A. Hardaway, A.M., M.D., Professor of Diseases of the Skin and Syphilis in the Missouri Medical School, St. Louis; Physician for Diseases of the Skin to the Martha Parsons Hospital for Children, and to St. John's Hospital, St. Louis. Illustrated with 309 engravings and 20 full-page colored plates. Philadelphia: W. B. Saunders, 925 Walnut Street, 1898. Canadian agents, Carveth & Co., Toronto.

The trouble in the past in purchasing a work on skin diseases has been that it was necessary to go to the expense of one consisting of several volumes, and meant a great deal of time wasted in making references which, in a work of one volume, beca quite unnecessary. It is not required for us to allude to the war reception which this publishing house has been accorded in the past from the profession, not only in America, but practically all over the world, owing to the scale of magnificence with which they produced the other American Text-books on Surgery, Obstetrics, etc. Sufficient be it to add that if this volume on Genito urinary diseases and Syphilis meets with the same amount of approval, and we feel certain that it will, the publishers will realize that they will be recouped in a liberal manner for their enormous outlay. The list of contributors include such men as Drs. Chas W. Allen, of New York: C. W. Cutler, of Vermont University: W. T. Corlett, of Cleveland: J. A. Cantrell, of Philadelphia; Lewis C. Bosher, of Virginia Medical College: I. E. Atkinson, of Baltimore: Eugene Fuller, of New York: Geo. T. Jackson, of the Woman's Medical College, New York Infirmary: Abraham Jacobs, New York; G. M Hammond, of New York: Hermann G. Klotz, of the German Hospital, New York, and others. It will be of special interest also to note that our old friend, Douglas Montgomery, now of San Francisco, Cal, is "on the list," and that Dr. F. J. Shepherd, of Montreal General Hospital, is also a contributor. That it is a boon to practitioners to be able to secure in such a form as this one volume, containing in such detail a presentation of the diseases of the genito-urinary organs, venereal diseases and affections of the skin, goes without saying. It is not necessary nowadays for a physician, who is at all up in his work, to have to purchase a work which goes into any particular department of

medicine, commencing with the preliminaries of etiology and symptomatology, and wading through all the different chapters with which he ought to be more or less familiar, but on the other hand to be able to secure one large volume which presents all that is latest and best on three such closely related subjects as this work deals with, is an opportunity not to be lost. In the American Text-Book of Skin Diseases the contributors have in a most happy manner so condensed what points they have succeeded in making as to present in comparatively small space an extremely wide range of subjects, making the matter both practical and authoritative. The colored plates are most perfect, especially the ones showing syphilitic affections of the eyelids and papulo squamous syphilide.

The Diseases of the Stomach. By William W. Van Valzah, A.M. M.D., Professor of General Medicine and Diseases of the Digestive System in the New York Polyclinic Medical School and Hospital, and J. Douglas Nisbet, A.B., M.D., Adjunct Professor of General Medicine and Diseases of the Digestive System in the New York Polyclinic Medical School and Hospital. Illustrated. Philadelphia: W. B Saunders, 925 Walnut Street, 1898. Canadian Agents: Carveth & Co., Toronto.

We are pleased to notice that the authors of this book have departed from a usual hard and fast rule and that leaving out preliminaries, most attention is drawn to the recent methods of both diagnosis and treatment. Chapter I. (of section 2) is devoted to clinical history: chapter II. to physical signs: chapter III. to functional signs, including secretion, the motor function, absorption and digestive work: chapter IV to bacteriological signs and V. to anatomical signs. Section 3 is devoted to general medication, such as digestive hygiene, diet, physical remedies, symptomatic, physiological, bacteriological and chemical treatment. It will thus be seen that the space in this work has not been filled in with prolonged dissertations on pathology, or anatomy: but the authors, recognizing the value of it, have given the readers the advantage of the very latest knowledge of not only diagnostic methods, but also of treatment. What is more, the subject of treatment is given the reader in such a manner as to leave not the least doubt as to what method should be pursued in any one particular case showing definite symptoms and pursuing a certain path. This is also somewhat of a divergence, and a happy one at that, from the usual stereotyped course pursued by authors generally. The subject of dietetics is given more than ordinary scope. The several foods are taken up and discussed from their nutritive standpoint, showing in what conditions of the stomach they are most applicable. Diet lists for the various diseases are also given fully. Section 4 is devoted to the dynamic affections of the stomach, and Section 5 to the anatomical diseases of the stomach. The second chapter of the latter section, on ulcer of the stomach, is exceedingly clearly written, but,

in our opinion, the most thoroughly concise part of the entire book is that in section 6, on secondary diseases of the stomach. We only regret that there are not a larger number of illustrations, which in a work on this subject are of such assistance to the student.

Brief Essays on Orthopedic Surgery. By Newton M. Shaffer, M.D. D. Appleton & Co, New York. Canadian Agent: Geo Morang, Toronto.

This little collection of essays is written by a well-known representative of conservative orthopedic surgery in New York, who himself is a successful representative of the teaching here inculcated. There is much for careful consideration, not only by those who are orthopedic surgeons but also by the general surgeon and physician. Dr. Shaffer is a perspicuous writer who sticks well to his theme. The central thought of the book is found in his definition of orthopedic surgery, page 45: "Orthopedic surgery is that department of surgery which includes the prevention, the mechanical treatment and the operative treatment of chronic or progressive deformities, *for the proper treatment of which special forms of apparatus or special mechanical dressings are necessary.*"

These essays can be read in a couple of hours, and it will repay every practitioner to give the subject this much time, as they will assist in clarifying opinions which at the present time are rather vague and indistinct in the minds of many. B. E. M'K.

A Manual of Instruction in the Principles of Prompt Aid to the Injured, including a chapter on Hygiene and the Drill Regulations of Hospital Corps, U.S.A., designed for Military and Civil Use. By Alvah H. Doty. Second edition, revised and enlarged. New York: D. Appleton & Company. London: 33 Bedford Street, 1898.

The second edition of Prompt Aid to the Injured aims at conveying to the average, intelligent layman sufficient surgical knowledge (including physiological and anatomical) to enable him to know what to do until skilled help arrives. The subject of antiseptics and disinfectants is treated with the prominent consideration which it deserves. Such knowledge should become universally known, the agents and methods of disinfection. The treatment of hæmorrhage, poisoning, wounds, convulsions, etc., is modern and described in untechnical language, so as to be readily grasped. This little book will be of especial use to members of ambulance corps and of those organizations, guilds, etc., where this special line of work is being so heartily taken up. J. N. E. B.

The Sanitarian. Published monthly. The American News, New York, General Agents. Price, $4.00 a year: 35 cents a copy.

The May number of this monthly contains several very readable articles. The abstract of report of Visiting Committee of the

Buffalo School Association is interesting to Toronto readers at present, owing to the fact that conditions and defects similar to those noted in the report are declared to exist in the temporary schools of this city.

Dr. Goler's report on the inefficiency of formaldehyde disinfection in the presence of moisture should be read by Sanitarians who have seen the article in the *Canadian Journal of Medicine and Surgery*, May, 1898, p. 279, where an opposite view is expressed.

J. J. C.

Operative Gynecology. By HOWARD KELLY, M.D.

It was with a great deal of satisfaction that we were favored by the publisher, Mr. George Morang, the other day, with a copy of Vol. I. of Dr. Howard A. Kelly's work on Operative Gynecology. The profession have been looking forward for quite a time now to the completion of this splendid work, as, from the most cursory glance, we can safely say that for elegance in typography and magnificence of illustrations alone, Dr. Kelly's book has seldom been equalled. We have not had time to go into the details of the work, but hope to do so in our next issue.

MAGAZINES RECEIVED.

The June *Scribner*, though made up on the eve of war, contains evidences of the impending calamity in several clear and serviceable war maps, which were inserted after the rest of the magazine had gone to press. The new feature in the June number is C. D. Gibson's pictorial record of "A New York Day—Morning." In a series of full-page drawings Mr. Gibson shows morning scenes, on the ferry, at breakfast, on an elevated station, and at home. Vassar is the women's college described in this issue. Margaret Sherwood, a graduate familiar with the undergraduate life and tradition, tells about those phases of Vassar that are little known or understood by outsiders. What big cities can do with their water-front and what Boston has already accomplished by transforming unused shore-land into "Seaside Pleasure Grounds," is picturesquely described by Sylvester Baxter. Anton Seidl is the subject of a brief and pertinent appreciation by H. E. Krehbiel, the musical critic. Mr. Wyckoff's narrative of "The Workers" takes on a brighter tone in this issue. Senator Lodge's "Story of the Revolution" has reached the period that was the test of Washington's greatness—the terrible winter at Valley Forge, the sneers of Congress, the defeat at Brandywine and Germantown, and finally the victory at Monmouth. A Northern soldier and his charming daughter step into the troublous times of the Old Virginia County that is the scene of Mr. Page's serial "Red Rock." Mr. Page distributes his villains and heroes to the North and South alike. Mr. Davis's dramatic tale, "The King's Jackal," reveals a pretty

piece of work by the young American newspaper correspondent in checkmating the King and his conspiritors. A new writer of short stories, Miss Anne Douglas Sedgwick, contributes a tale of artist life—"Miss Jones and the Masterpiece." "The Field of Art" discusses "Landscape Painters and the Summer."

The *American X-Ray Journal* has reached its tenth issue with increased pages, greater vigor and improved text The appearance of this publication is most attractive, its illustrations are most carefully prepared and the composition of the most practical nature. It was launched into the world of journalism as "A Monthly devoted to the practical application of the new science and the physical improvement of man" just sixteen months after Professor Roentgen had made public his discovery. Following so closely the announcement of the X-rays, it did not seem that there was room for this special journalism. Day after day, however, interest and importance in this phenomena has grown, until now scarcely is there a division of our science which occupies greater attention than X radiance and its practical application to man. The wisdom of the editor has been fully realized, and the publication is an assured success. In looking over the pages, it is evident that the *American X-Ray Journal* gleans its matter from all sources of the earth, from physicians and surgeons using X-rays in practice and from the scientist whose labors are directed to the improvement of the generating apparatus. The overwhelming evidence in favor of the use of the X-rays in practice has become so generally accepted, that physicians who will not become informed in this art must naturally be relegated to that class who take a step backwards. The journal is published in St. Louis, Mo., and we are proud to be able to thus mention this contribution to the literature of the medical profession.

As an instance of the high esteem in which the *Journal of the American Medical Association*, Chicago, our most valued exchange, is held by the medical profession, the following from the *Journal* of May 4, is of interest: A physician of Claremont, South Africa, after perusal of his *Journal* of March 20, 1897, sent it to a number of his correspondents in rotation, whom he thought would be especially interested. The circuit taken by this copy of the *Journal* has required a little more than a year, going first from Chicago to South Africa, thence to the Island of St. Helena, thence to a medical officer stationed in Uganda (somewhere near Lake Victoria Nyanza), thence to Transvaal, Basutoland, Johannesburg, Port Elizabeth, Namaqualand, and two places in Cape Town, when it was returned to the office of the *Journal*. When the journey thus made is traced on the map, and we remember that it was only a book packet, we have not only an instance of the high esteem in which the medical profession hold the *Journal*, but a proof of the professional bond existing between practitioners totally unknown to one another.

New Hampshire Sanitary Journal, Vol. 1, No. 1. A quarterly magazine in the interest of healthful homes and communities. The official organ of the New Hampshire State Board of Health and the New Hampshire Association of Boards of Health. One dollar a year, twenty-five cents a copy. Irving A. Watson, A.M., M.D., editor, Concord, N.H. The first number of this quarterly, containing sixty-four pages of reading matter is to hand. It is well printed and well edited. As stated in the announcement, it is intended to be a means of communication between the New Hampshire State Health Board, of which Dr. Watson is the secretary, and the local boards. It will also contain original papers on sanitary subjects. We cordially wish Dr. Watson every success in his undertaking.—J.J.C.

The Outlook for May 21st contained the following articles: The Naval Situation, Cardenas, Cienfuegos and San Juan, The Philippines, The Volunteers, In Cuba, The Red Cross, War Legislation, Taxes and Prices, The Spanish Ministry, Sagasta's View, English Criticism, Mr. Chamberlain's Speech, The Church in the War, Constitutional Amendments, Hawaii, Mr. Gladstone, Charities and Correction; and as editorials, Is This a Righteous War? The National Guard, The Italian Crisis, The Spectator, A Refreshing Correspondence.

PAMPHLETS, REPRINTS, ETC., RECEIVED.

"Some Cases of Brain Surgery." By Hal C. Wyman, M.S., M.D., Detroit Mich.

"A Clinical Study of Kryofine" By Sidney V. Haas, M.D., and J. Bennett Morrison, M.D., New York.

"Successful Treatment of Chronic (Subacute) Rheumatism." By Gustavus M. Bleek, M.D., A.B, Detroit, Mich.

"A Preliminary Report on a Method of Overcoming High Resistance in Crookes' Tubes: A Possible Step towards Maximum Radiance." By Wm. W. Graves, M.D., St. Louis, Mo.

"Some Remarks and Reports upon Specimens in Abdominal Surgery." By H. O. Walker, M.D., Detroit, Mich. Reprinted from *The Physician and Surgeon*. Detroit and Ann Arbor.

Sixteenth Annual Report of the Provincial Board of Health of Ontario, being for the year 1897. Printed by order of the Legislative Assembly of Ontario. Toronto: Warwick Bros. & Rutter, printers, etc, 68 and 70, Front Street West, 1898.

"Renal Suppuration, Catarrhal, Specific and Traumatic, and the value of Micro-Urinalysis of the Urinary Sediment, as an aid to Definite Diagnosis of it." By Thomas H. Manley, M.D., Professor of Surgery, New York School of Clinical Medicine, New York. Reprinted from the Journal of the American Medical Association, November 13 and 20, 1897. Chicago: American Medical Association Press, 1897.

Personals, Etc.

Dr. Skinner has commenced practice at 492 Yonge Street.

Dr. W. J. McCollum, of Jarvis Street, was married last month.

Dr. H. H. Oldright, of Spadina Ave., has opened a down-town office at 34 Victoria Street.

Dr. Kerr, of Dovercourt Road, has left to attend the American Medical Association at Denver.

Toronto General Hospital's Branch, on Bay Street, is rapidly approaching completion.

Mrs. D. J. Gibb Wishart, wife of Dr. Wishart, is, it is pleasing to note, convalescing from an illness.

We are glad to know that Dr. Norman Allen has recovered from his recent attack of septicæmia.

At 525 Sherbourne Street, on Friday, May 13th, 1898, the wife of Dr. Frederick Winnett, of a daughter.

Dr. J. S. King has removed from the Oddfellows' Building, Yonge and College Streets, to 288 Jarvis Street.

Dr. C. F. Moore has removed into his handsome new home, 91 Bellevue Ave., and is comfortably ensconced there.

Dr. Price Brown attended the meeting of the American Laryngological Association at Pittsburg, Pa., last month.

Dr. A. H. Garratt has associated with him in practice Dr. McKenzie, nephew of the Toronto Railway Co.'s President.

Dr. George S. Rennie, of Hamilton, who was seriously injured April 7th, through a runaway accident, has quite recovered.

We extend our sympathy to Dr. John Hunter, of Toronto, in the death of his brother, with whom he returned from California last month.

Dr. Gilbert Gordon, of this city, will be married next week to a Winnipeg lady, and intends afterwards to take an extended trip through Europe.

After considerably embellishing the house and grounds, Dr. Geo. Carveth is now comfortably settled in his new home, corner College and Huron Streets.

Dr. A. S. Tilley, of Bowmanville, Dr. T. H. Balfe, of Hamilton, and Dr. R. J. Gibson, of Sault Ste. Marie, have been appointed associate coroners in their respective districts.

Dr. F. R. Brown, of Madeira, California, brother of Dr. Price Brown, of Toronto, died at home April 4th, 1898, aged 61, after an illness of four days, from septicæmia due to inoculation while operating on a gangrenous patient at the county hospital.

Items of Interest.

THE WATER DRINKING HABIT.

Most European physicians, or at least very many European physicians, believe that the most active cause of gastro-intestinal disturbance in America is the habitual use of ice-water, and there can be no doubt that flooding the stomach with large quantities of ice-water during eating has a tendency, by lowering temporarily the temperature of the viscus, as well as by diluting the gastric juice, to cause disturbances of digestion, which on repetition may result in the production of gastric catarrh. On the other hand, the habitual taking of large amounts of water is very advantageous for all gouty individuals, and indeed for all persons who eat more than the needs of the system require, as is very clearly pointed out by the editor of the *American Medico-Surgical Bulletin*, whose remarks are here quoted.

It would seem, *a priori*, probable that in its relations with water the human system obeys to a greater or less extent the ordinary physical and chemical laws. What is taken into the body must get out of the body, sooner or later; and the discharge of large quantities of water necessarily increases the flow of excretion. The old researches of Roux and of Boecker indicated that the increase of the amount of urine which follows the water-drinking is sometimes, but not always, accompanied by an increase in the output of solids from the kidneys. The cause of the differences of effects has been shown by Meyer to depend upon the condition of the body; the excess of water in the system appears to have very little influence on tissue-disintegration, but to be powerful in dissolving or carrying off—in other words, in washing out—all excrementitious materials, whether such materials be due to disintegration of the tissues themselves or be educts from an excessive food-supply.

The American habit of drinking water has not, however, arisen from the promptings of any blind instinct leading the race to attempt to wash out of the body the products of excessive self-indulgence, or the last taint of a gouty British ancestry; but has simply sprung from the climatic condition. The dry air (as compared with Europe) and the high temperature of the summer months make the American throw off water and make the system demand water. The vacuum in the body must be supplied. That the American people do not drink more water than they need is shown by the fact that the American man is a drier individual, not only in his speech but also in his tissues, than is the European. True humor consists of a kernel of truth surrounded by a hull grotesquely unfit for it; and so the humorist habitually expresses

a physiological fact when he makes John Bull in the cartoon plump and succulent, and Brother Jonathan hard and dry. Many years ago the writer of this editorial, at a meeting of the physiological sections of an International Congress, said that a certain physiological operation or procedure reported by European physiologists did not produce the results upon dogs which were alleged, unless indeed the European canine were very different from his American brother: a suggestion that led to a general titter until Brown-Séquard got upon his feet and said that he had studied and practised medicine and studied and practised vivisection on the two continents, and that it was a fact that the American people and the American dogs and lower animals were distinctly different in vascularity from their respective kindreds in Europe: that operations in vivisection which in Europe he could scarcely perform on account of the amount of bleeding produced he had often done on the American dog with almost dry tissues.

The American drinks water because he is thirsty; he is thirsty because he sweats; and he wants his water cold because he is hot; the cooling of the system being demanded, but the cool temperature being especially grateful to a heated throat. What is the poor American to do? He is threatened with mummification if he does not drink water; he is appalled by the horrors of gastric catarrh if he does drink water. The answer is obvious: drink water *between* meals rather than at meals. The drier the meals the less dilute the gastric juice, the better theoretically at least is the digestion. Fortunately, the ordinary human being is made with a reserve force, and so if he be in the ordinary condition he need not study the number of drops of water he takes with his meal; but if he have any disease of the stomach or feebleness of digestion it is well worth while to count the drops.

Cold water has so good a taste when a man is very heated that most people will continue to take cold water, and a general chilling of the body would seem sometimes to be of service. Nevertheless, there probably are cases in which the sudden pouring of large masses of cold water upon a stomach in a person who has little reserve power has produced an immediate violent disturbance. These cases are, however, in our opinion, few; indeed, our belief in their existence may be due to the nursery teaching of our early childhood, since if the truth must be spoken, in a medical experience extending over thirty-five years, we have never seen colic, collapse or any other acute symptom or condition produced by a cold drink. But for fear that the nursery bogie is the shadow of truth, we would advise our readers when hot to drink cold water slowly. We remember once, when two-thirds dead of thirst in the Texan desert, with what joy we raised to our lips a quart mug of water and drank it to the bottom without a breath, but in an ordinary emergency a half-tumblerful of cold water, followed in a moment or two (if it must be) by the other half-tumblerful of water, should satisfy the ordinary individual. At the present time, at least in the city of

Philadelphia, and we opine in various other cities of less ill repute, it is wiser for the drinker by boiling the water to substitute soup for an infusion of raw products.—*Dietetic and Hygienic Gazette.*

ABORIGINAL GRATITUDE.

In his efforts to cure his patients and maintain the honor of his profession nothing is more helpful to a medical man than the knowledge that his labors are appreciated, and spontaneous recognitions of his work atone for much disappointment, brighten the dull routine of duty, and stimulate to fresh endeavors. Though we are able to record frequent examples of the recognition of services rendered by medical men among civilized races it is but seldom that we can refer to an event like that reported by the *Fiji Colonist and Levuka Gazette* of December 4th, 1897. Our antipodean contemporary reports a farewell entertainment or "*meke*" given by the natives of Levuka and district to their retiring medical officer, Mr George Fox. Mr. and Mrs. Fox and a few friends were invited to the house of Ratu Vilemoni, the chief native, when "some score or more of the maiden beauties of the district, gaily dressed in their most imposing *sulus* and wreaths of flowers and *Wa-Kalou*, presented themselves, when a series of *mekes* was performed, ranging from the soft slow cadences which would make such a delightful lullaby to the quick joyous tones which give one the impression that these children of nature are without a care in the world." Ratu Vilemoni then presented Mr Fox with some mats, some valuable curios of old Fiji, and a dainty *Roi*. The *Fiji Colonist*, in concluding its report, observes: "The invitation was issued spontaneously and it is doubtful if such an honor has ever before been tendered any retiring medical man for the express purpose of signifying the natives' appreciation of his services among them. Commissioners, magistrates, and acting Rokos—yes, by the score, as to one in authority, but to one who has waited upon them and as a recognition of benefits received the occurrence is almost unique and reflects great credit on all who were concerned in providing it." Whatever the exact character of a "*meke*" the circumstances under which it was given are as creditable to the Fijian natives on the one hand as they are to Mr. Fox on the other. If untutored aborigines can recognize in such a tangible manner the services of the medical man whom Government provides for them, notwithstanding what our poet says of "benefits forgot," the time has not come to despair of the rest of mankind. And in spite of medical aid sweaters and the grudging parsimony which discharges all its obligations with the tardy payment of an oft-rendered account there will never be lacking some who will recognize unselfish performance of duty and lift from the jaded medical man the gloom which, but for them, would settle upon him and stifle some of the most generous impulses of the heart.—*Lancet.*

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